N.O.T.E.S.

Старший научный сотрудник ПНИЛ хирургической гастроэнтерологии и эндоскопии (Зав. лаб.,член-корр. РАМН, проф. Панцырев Ю.М.), Кафедра госпитальной хирургии № 2 (зав. каф., проф. Шаповальянц С.Г.), Городская клиническая больница № 31 (глав. врач, член-корр. РАМН, проф. Голухов Г.Н.),
Российский Государственный Медицинский Университет,

хирург-эндоскопист Тимофеев Михаил Евгеньевич

Краткий фото отчет о N.O.T.E.S. технологиях на 11- ом ВСЕМИРНОМ КОНГРЕССЕ ПО ЭНДОСКОПИЧЕСКОЙ ХИРУРГИИ,

11-th WORLD CONGRESS OF ENDOSCOPIC SURGERY (WCES) YOKOHAMA, JAPAN,

September 2 – 5, 2008

И Д Е Я

В этой презентации сконцентрирована БОЛЬШАЯ ЭНЕРГЕТИКА МИРОВОЙ НАУКИ в *N.O.T.E.S.* направлении,

так как она создана на материале ведущих специалистов в этой области, включая их доклады и слайды, обсуждения в зале и кулуарах, мечты о совершенствовании эндоскопических технологий и *укреплении статуса*

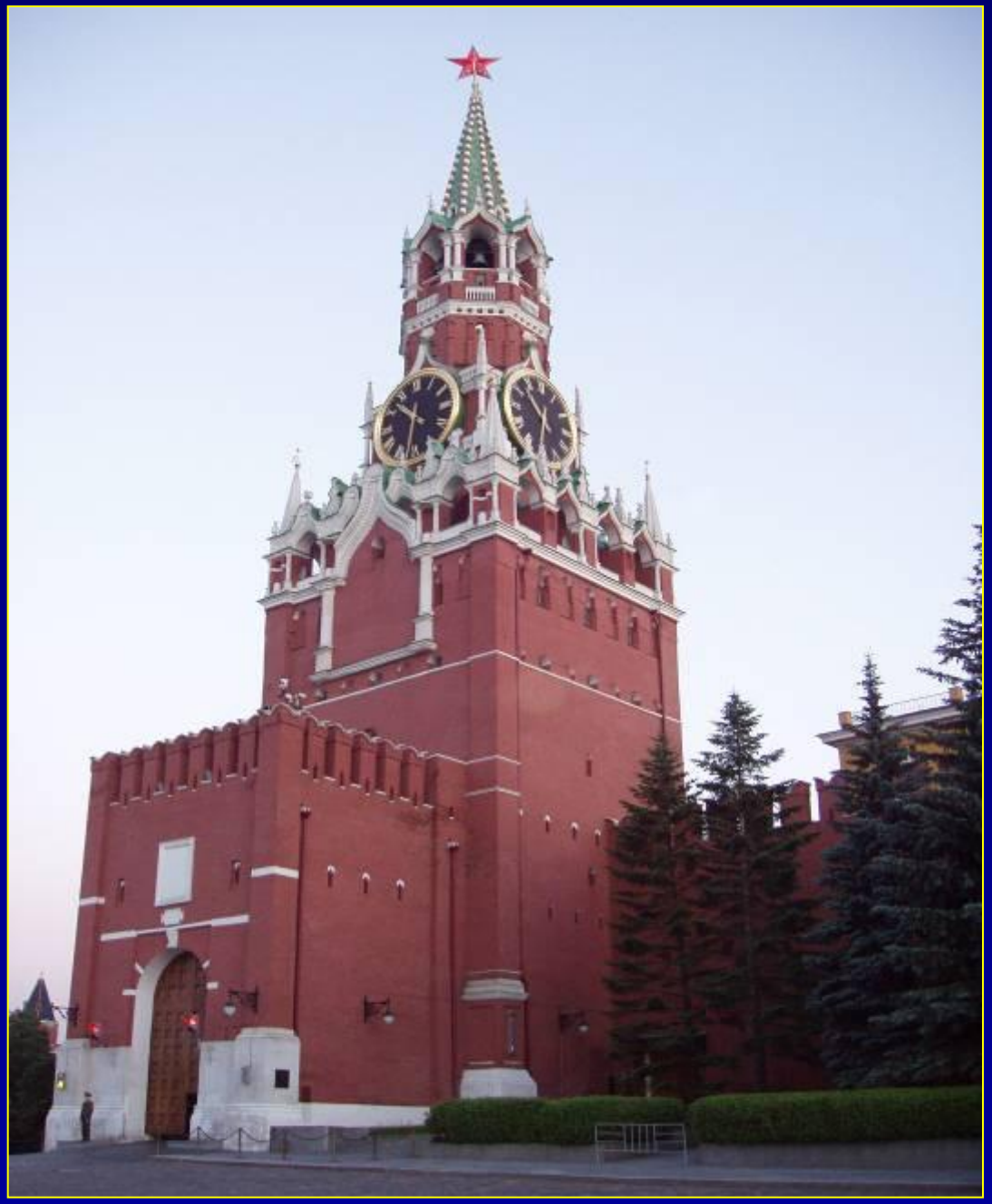
ВРАЧА – ЭНДОСКОПИСТА...,

О ВЫЗДОРОВЛЕНИИ ПАЦИЕНТОВ С МИНИМАЛЬНЫМИ ЗАТРАТАМИ *ИХ* ЗДОРОВЬЯ НА ЭТО…

БОЛЬШОЕ СПАСИБО !
ЗА ПОЗНАНИЕ И ПОНИМАНИЕ
***N.O.T.E.S.* ТЕХНОЛОГИЙ**

ВАТАРУ ТАКАХАШИ
ЕМЕЛЬЯНОВУ С.И.
ИЗУМИ КАДОЯ
КАЗАКУ С.М.
ЛУЦЕВИЧУ О.И.
МИТРОФАНОВУ Д.О.
НЕХЗЕР А.А.
СТАРКОВУ Ю.Г.
ФЕДОРОВУ А.В.
ФЕДОРОВУ Е.Д.
ШИШИНУ К.В.

СОВМЕСТНЫЙ ПЕРЕЛЕТ ИЗ СТОЛИЦЫ НАШЕЙ РОДИНЫ - МОСКВЫ



В …

Я П О Н И Ю …

11-th WORLD CONGRESS OF ENDOSCOPIC SURGERY (WCES)
YOKOHAMA, JAPAN, September 2 – 5, 2008

ВЫСТАВОЧНЫЙ КОМПЛЕКС

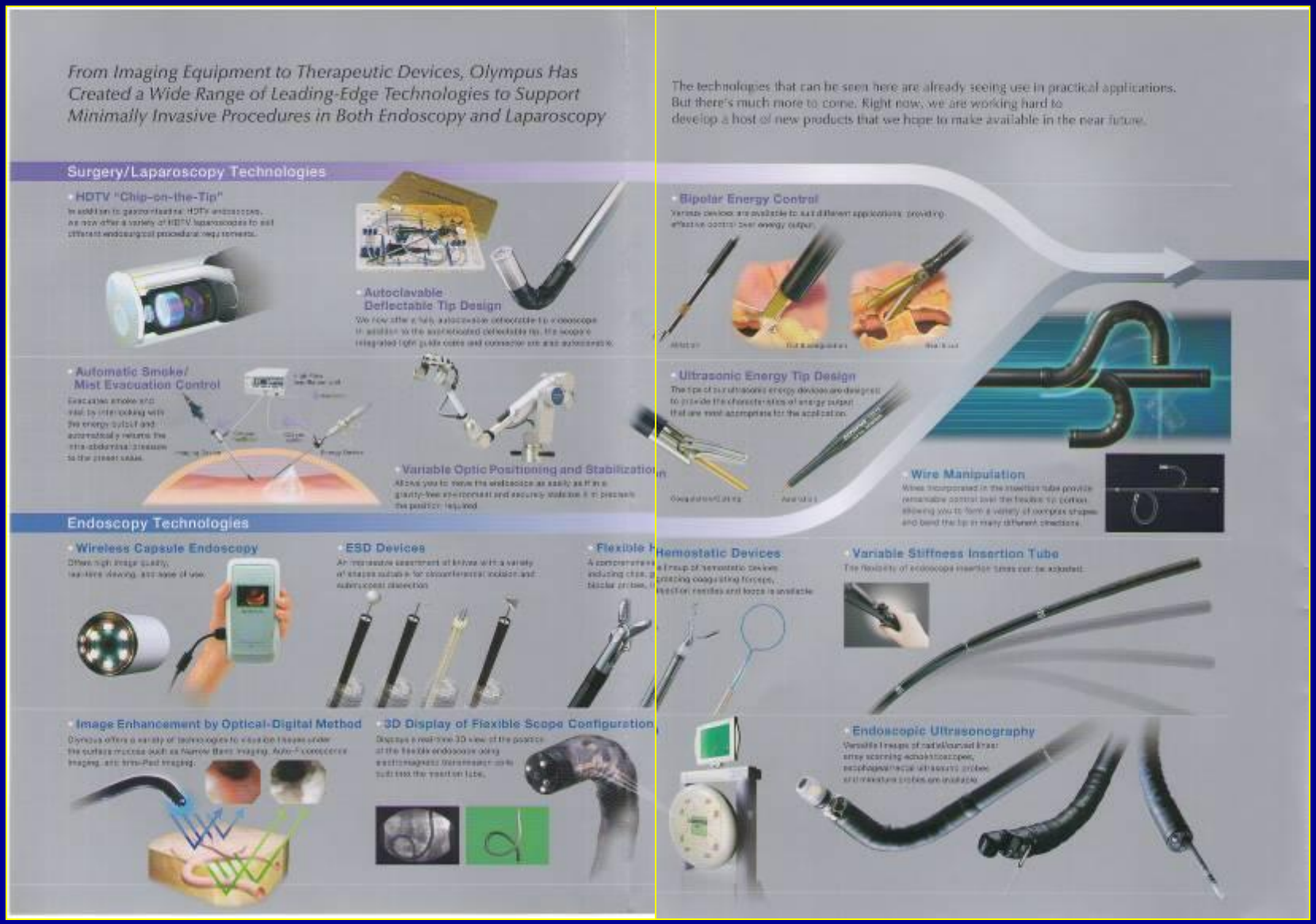
КОНФЕРЦ. ХОЛЛ

РОССИЙСКАЯ ДЕЛЕГАЦИЯ 11-го КОНГРЕССА НА СЕМИНАРЕ В ЦЕНТРАЛЬНОМ ОФИСЕ OLYMPUS г. ТОКИО

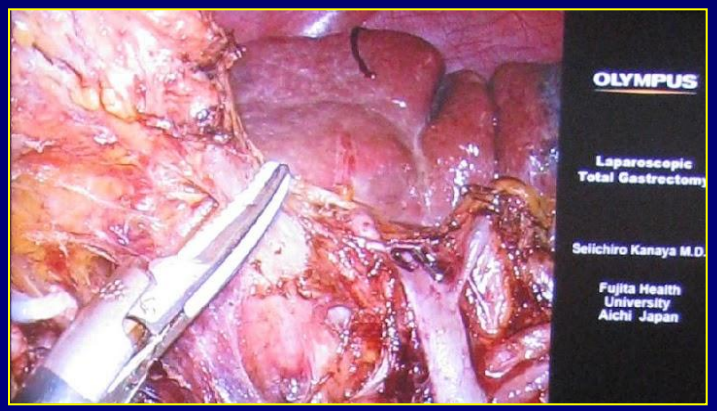
Т

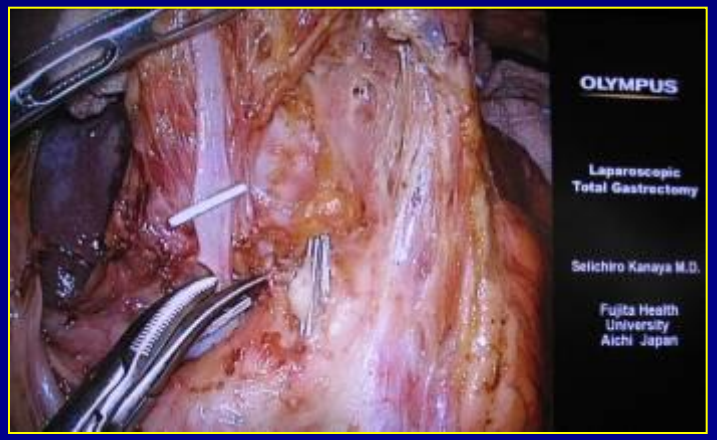
СЕМИНАР ПО НОВЫМ ТЕХНОЛОГИЯМ В ЦЕНТРАЛЬНОМ ОФИСЕ OLYMPUS г. ТОКИО

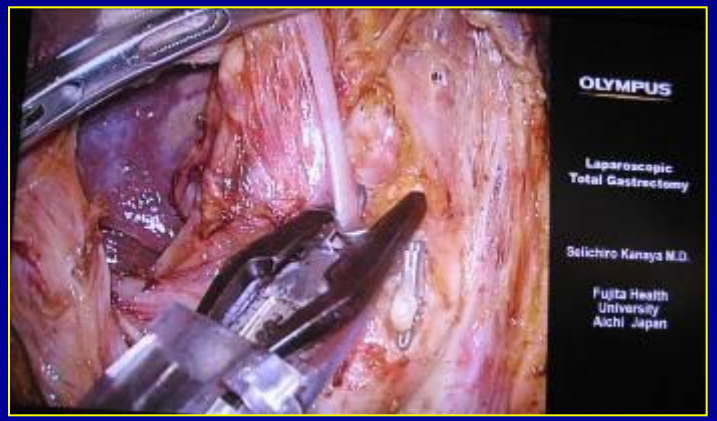
ПОЛНОЦЕННЫЙ СПЕКТР СОВРЕМЕННЕЙШЕГО ЭНДОСКОПИЧЕСКОГО ОБОРУДОВАНИЯ ФИРМЫ OLYMPUS



HD VIDEO LAPAROSCOPE and HD ENDOSCOPE



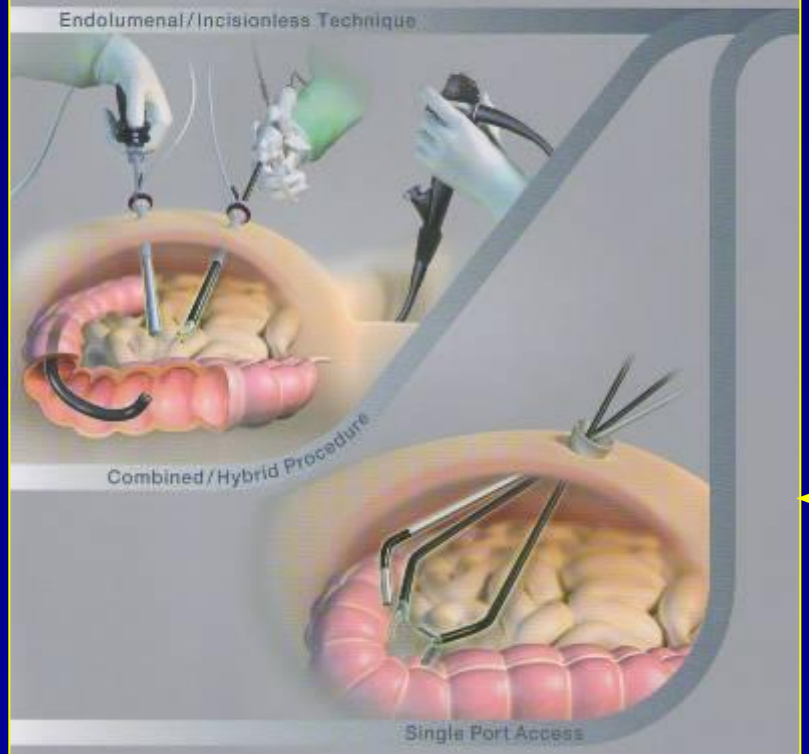




СЛИЯНИЕ ТЕХНОЛОГИЙ

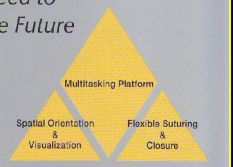
By Contributing to the Development of New Techniques Like Single Port Access, Combined/Hybrid, and Endolumenal/Incisionless Techniques, Olympus Is Forging the Era of Future MIS

The future of MIS has already begun. With the introduction of new techniques, endoscopic surgery is opening up new vistas and challenging traditional concepts of surgery. Olympus' role is to help consolidate those advances and provide doctors with the tools they need to take future MIS to the next level.



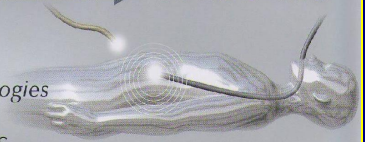
We Are Committed to Developing the Tools You Need to Facilitate New Minimally Invasive Techniques in the Future

Among the wide array of products we're developing, our focus is on developing devices that will provide the basis for a multitasking platform, support spatial orientation and visualization, and offer flexible suturing and closure.



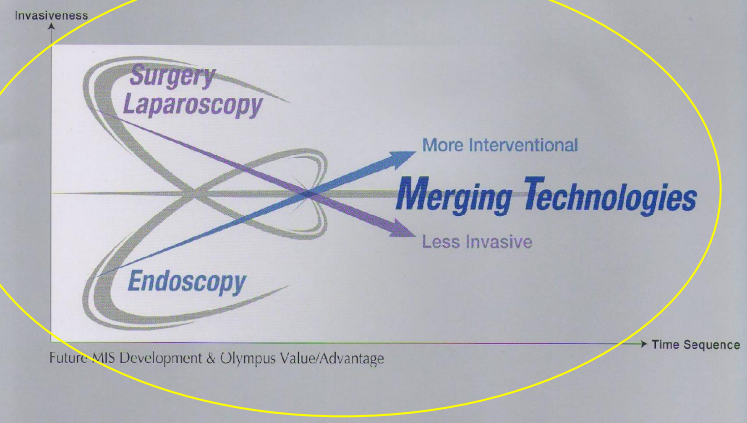
Where We Are Heading

Evolution → **Future MIS**



We Are Merging Our Diverse Technologies into New Value-Added Products That Are Helping Establish Future MIS

At Olympus, we have the technology and the experience to offer a solution that merges technologies to make laparoscopy less invasive and endoscopy more interventional, thus fulfilling the true potential of future MIS.



ЭВОЛЮЦИЯ ХИРУРГИЧЕСКОГО ДОСТУПА

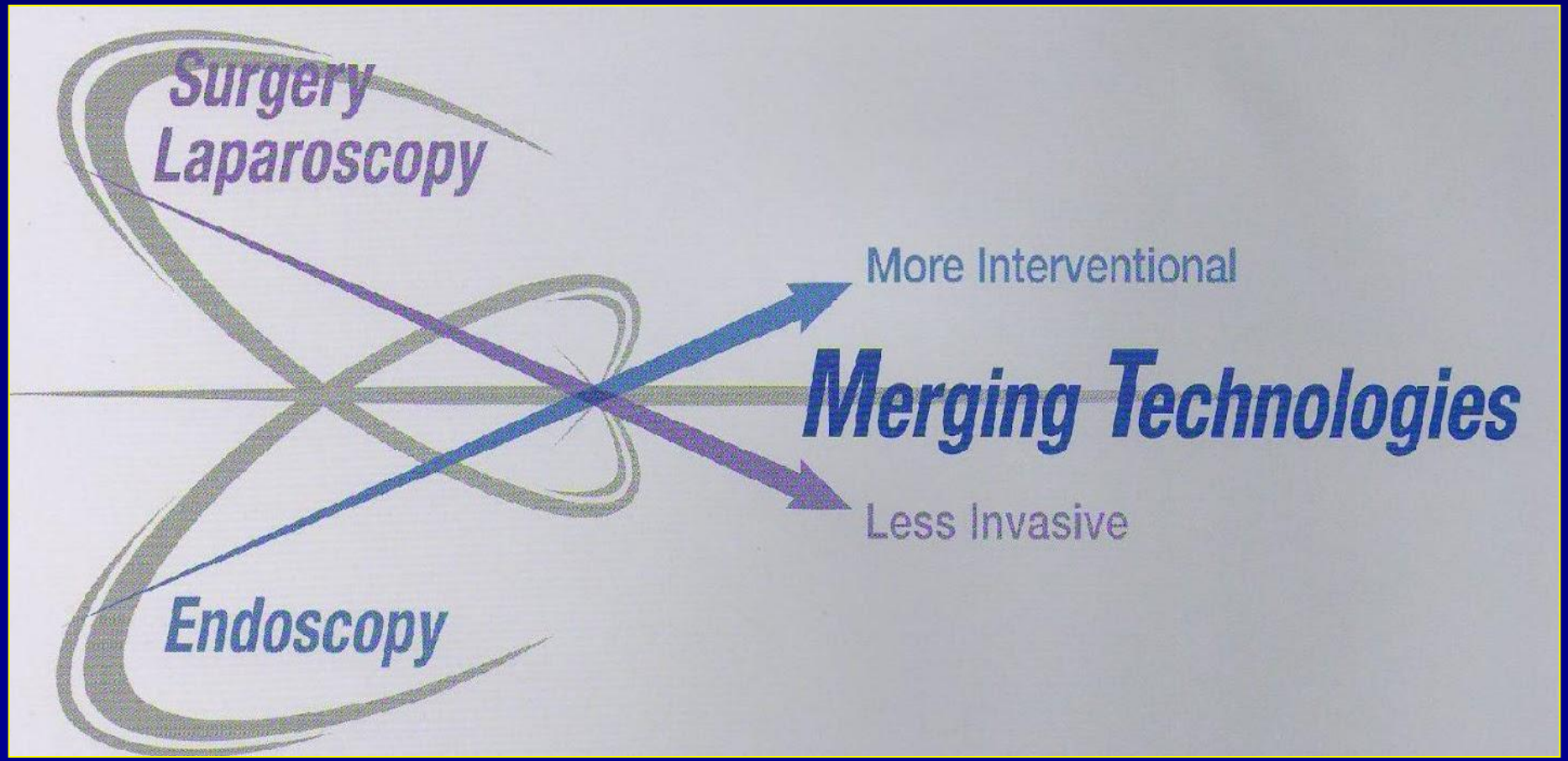
Традиционный доступ лапаротомия

Малотравматичный доступ минилапаротомия

Малотравматичный доступ лапароскопия

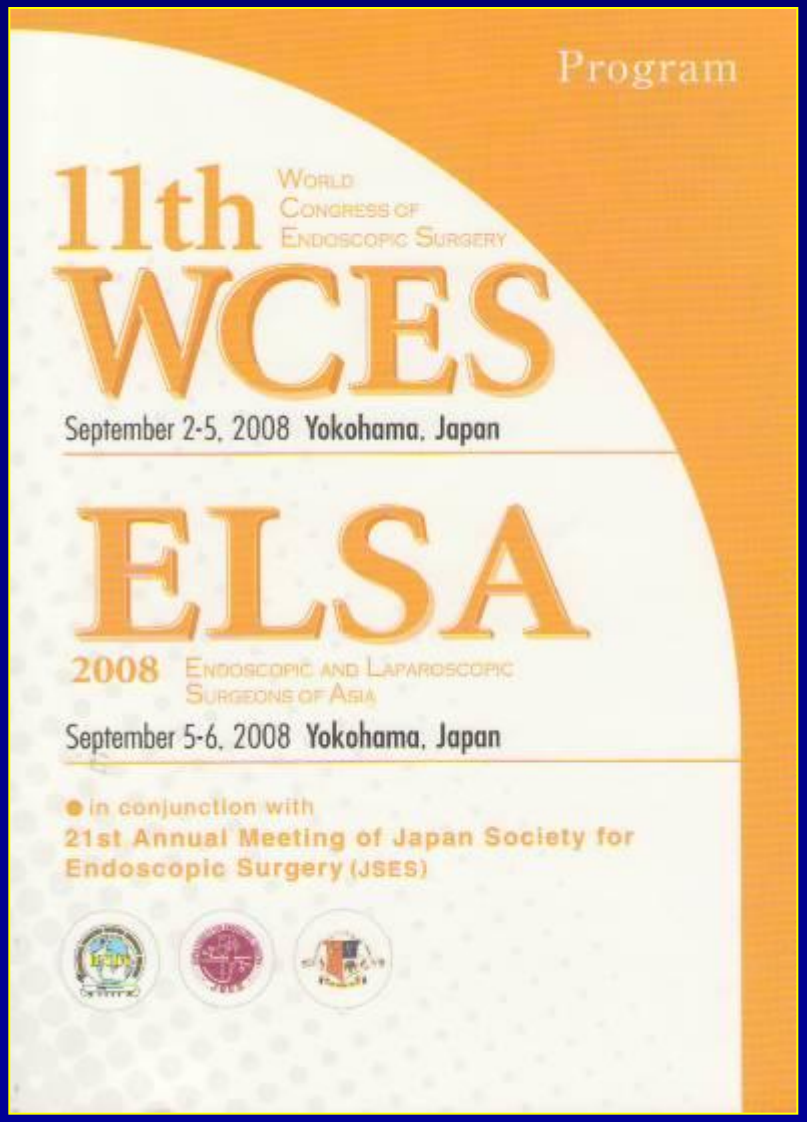
N.O.T.E.S. *(без повреждений передней брюшной стенки)*

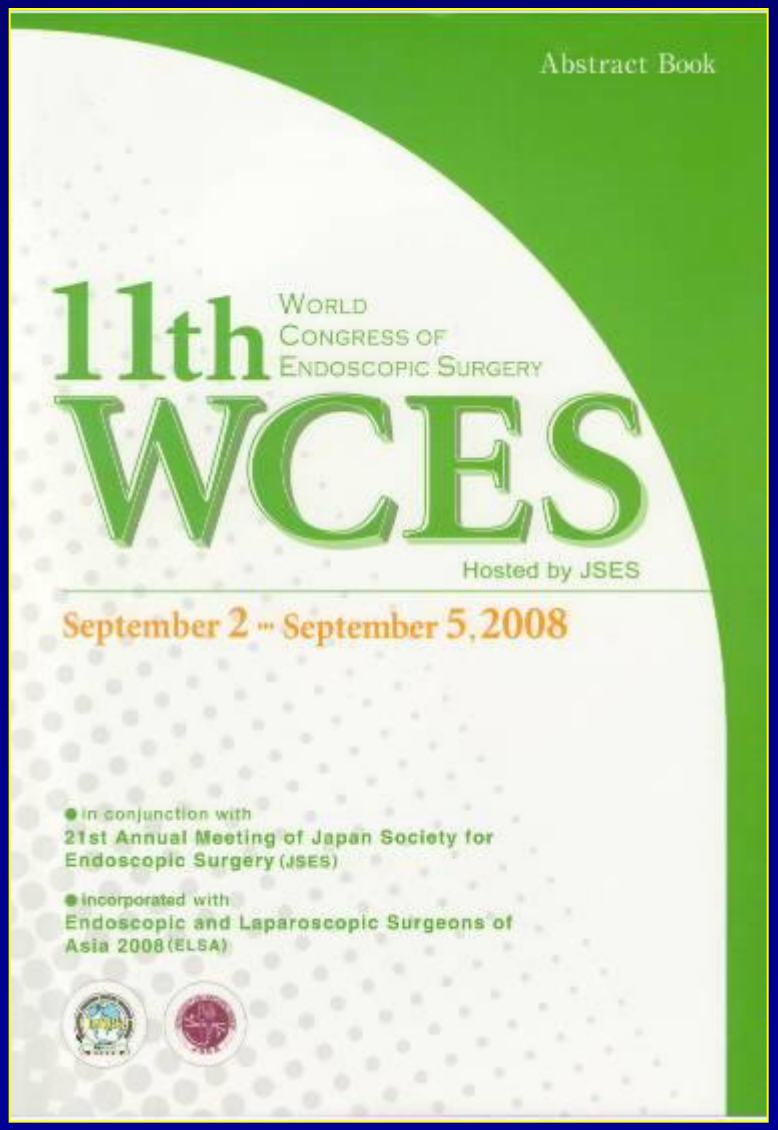
«ДЕВИЗ» 11-го МЕЖДУНАРОДНОГО КОНГРЕССА ПО ЭНДОСКОПИЧЕСКОЙ ХИРУРГИИ…



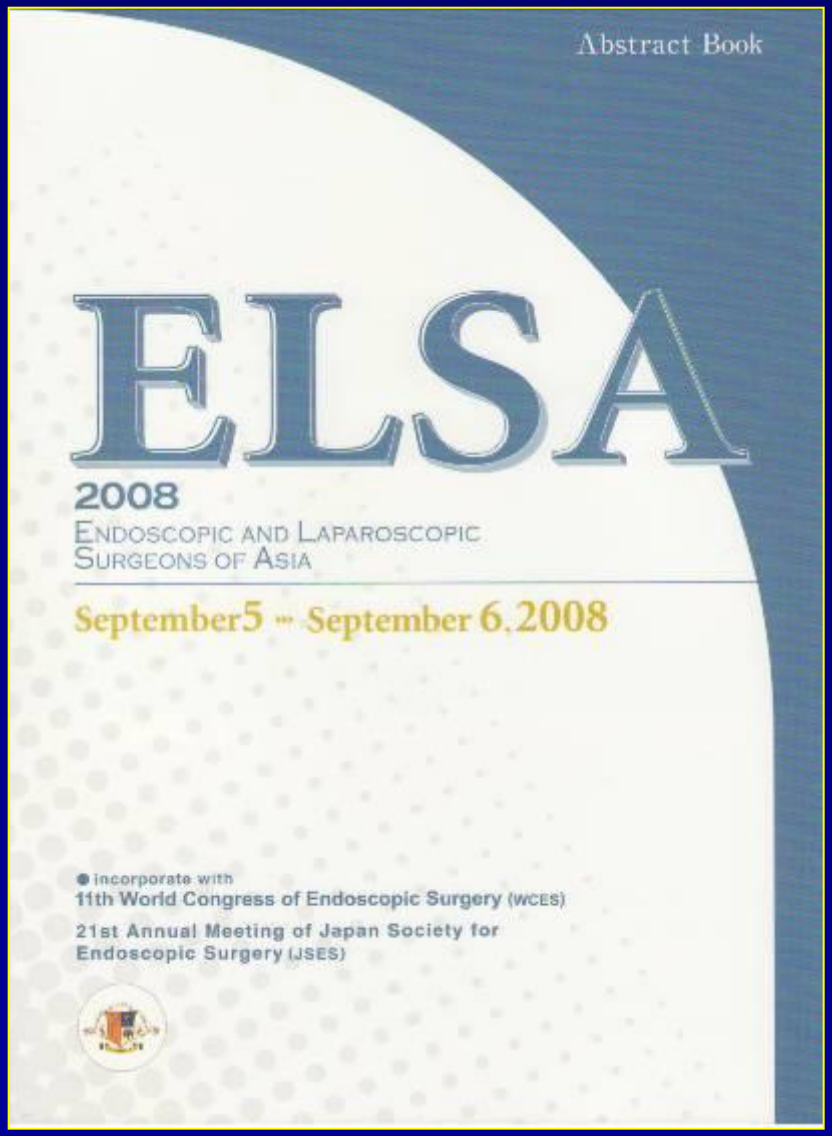
**…ВТОРОЕ ДЫХАНИЕ ЭНДОСКОПИИ,
А ТАК ЖЕ ДАЛЬНЕЙШИЙ ШТУРМ
ТРАДИЦИОННОЙ И ЛАПАРОСКОПИЧЕСКОЙ ХИРУРГИИ…**

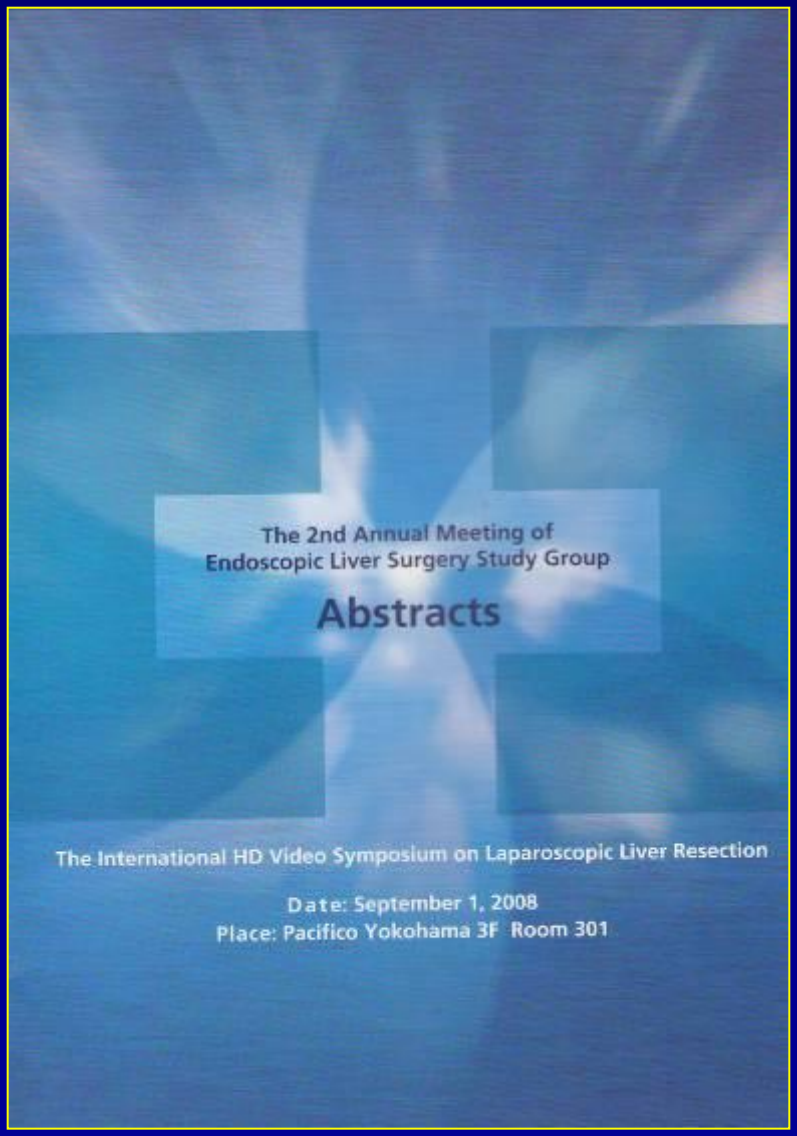
ОСНОВНЫЕ ДОКУМЕНТЫ КОНГРЕССА





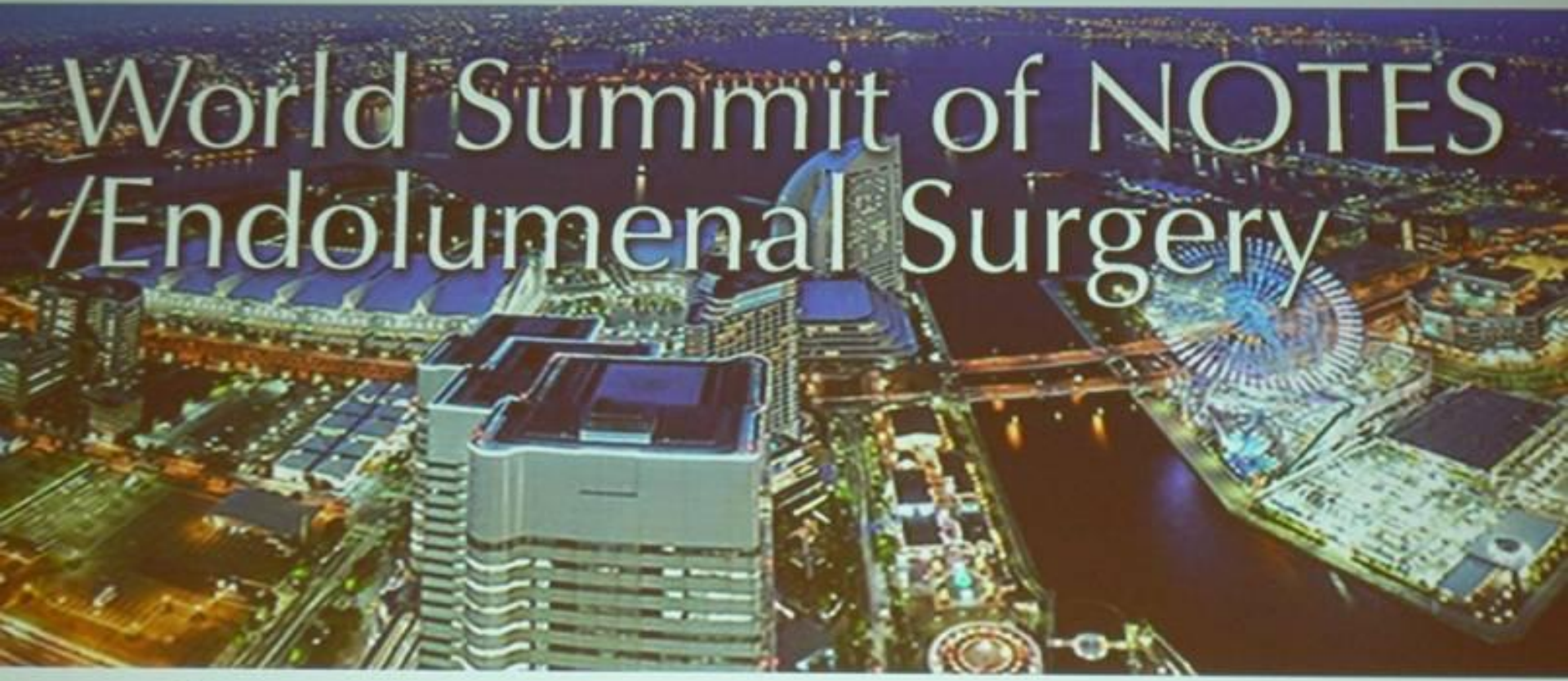
ОСНОВНЫЕ ДОКУМЕНТЫ КОНГРЕССА





11th WCES Symposium

World Summit of NOTES /Endolumenal Surgery



Sponsored by

OLYMPUS

Your Vision, Our Future

Laparoscopy

Merging Technologies

Endoscopy

Sep 3 (Wed) WCES

Sponsored Symposium 8:30 – 18:00 Room 6, 5F (Small Auditorium)

World Summit of NOTES / Endolumenal Surgery

8:30–8:40 **OPENING REMARKS** **Seigo Kitano, MD** Department of Surgery I, Oita University Faculty of Medicine, Oita, Japan

8:40–11:30 ***NOTES organizational activity update and proposal for the future***

Chairman: **Robert H. Hawes, MD** Division of Gastroenterology and Hepatology, Medical University of South Carolina, SC, USA
Antonio M. Lacy, MD Department of Surgery, Faculty of Medicine, University of Barcelona /Hospital Clinic, Barcelona, Spain

8:40–11:10 • **NOSCAR** • **EURO-NOTES** • **Japan NOTES** • **Asia-Pacific WG on NOTES** • **NOSLA (Latin America)**

Speaker:
- **NOSCAR** **David W. Rattner, MD** Department of Surgery, Massachusetts General Hospital, Boston, MA, USA
- **EURO-NOTES** **Karl-Hermann Fuchs, MD** Department of Surgery, Markus Krankenhaus, Frankfurt, Germany
- **Japan NOTES** **Hisao Tajiri, MD** Gastroenterology and Hepatology, The Jikei University School of Medicine, Tokyo, Japan
- **Asia-Pacific WG on NOTES** **Enders Kowk Wai Ng, MD** Department of Surgery, Chinese University of Hong Kong, Prince of Wales Hospital, Hong Kong, China
- **NOSLA** **Jose R. Speranza, MD** Generala Surgery, Universidad del Rosario, Rosario, Argentina

11:10–11:30 **DISCUSSION**
Speaker: All speakers

15:00–16:30 ***State of the Art: Endolumenal Surgery "Endolumenal Techniques and Future NOTES"***

• **Lower GI Surgery** • **Upper GI Surgery**

Chairman: **Seigo Kitano, MD** Department of Surgery I, Oita University Faculty of Medicine, Oita, Japan
Michael Ka Wah Li, MD Department of Surgery, Pamela Youde Nethersole Eastern Hospital, Hong Kong, China

Speaker:
- **Lower GI Surgery**
  1) **Jeffery W. Milsom, MD** Section of Colon and Rectal Surgery, Department of Surgery, Weill Medical College of Cornell University, New York Presbyterian Hospital, NY, USA
  2) **Naohisa Yahagi, MD** Department of Gastroenterology, Toranomon Hospital, Tokyo, Japan
- **Upper GI Surgery**
  1) **Kazuki Sumiyama, MD** Department of Endoscopy, The Jikei University School of Medicine, Tokyo, Japan
  2) **Kazuhiro Yasuda, MD** Department of Surgery I, Oita University Faculty of Medicine, Oita, Japan

16:30–18:00 ***State of the Art: NOTES "Various Approaches and Devices"***

Chairman: **Greg V. Stiegmann, MD** Department of Surgery, University of Colorado Denver, CO, USA
Karl-Hermann Fuchs, MD Department of Surgery, Markus Krankenhaus, Frankfurt, Germany

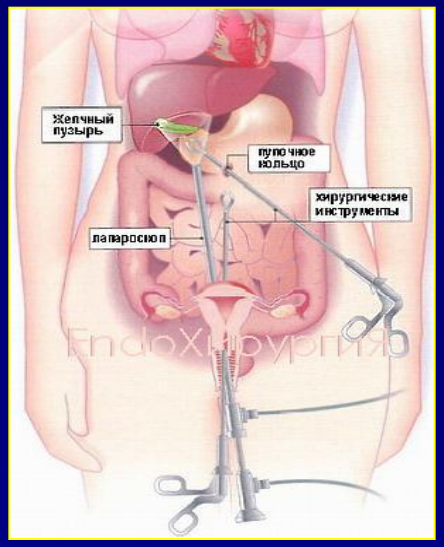
Speaker: **G. V. Rao, MD** Asian Institute of Gastroenterology, Hyderabad, India
Davide Lomanto, MD Minimally Invasive Surgical Centre, Department of Surgery, National University Hospital, Singapore
Lee L. Swanstrom, MD Minimally Invasive Surgery, Legacy Emanuel and Good Samaritan Hospitals, Legacy Health System, OR, USA
Paul Swain, MD Department of Surgical Oncology and Technology, Imperial College, London, UK
Antonio M. Lacy, MD Department of Surgery, Faculty of Medicine, University of Barcelona /Hospital Clinic, Barcelona, Spain

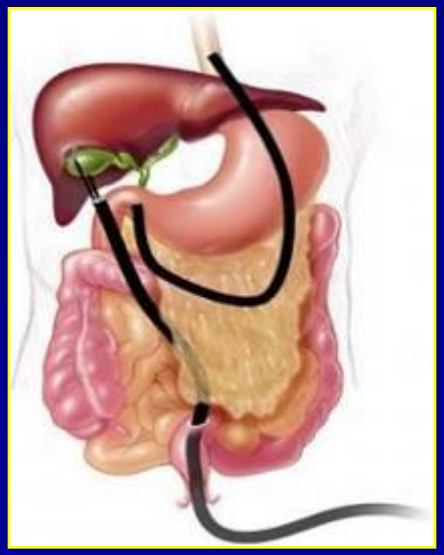
ТЕРМИНОЛОГИЯ *NOTES*

Natural Orifice Translumenal Endoscopic Surgery (Эндоскопическая транслюминальная хирургия через естественные отверстия)

E-NOTES	**Embryonic Natural Orifice *Translumenal* Endoscopic Surgery**
NOTUS	**Natural Orifice Trans *Umbilical* Surgery**
TUES	**Trans *Umbilical* Endoscopic Surgery**
TULA	**Trans *Umbilical* Laparoscopic Assisted**
SILS	**Single Incision Laparoscopic Surgery**
SPA	**Single Port Access**
OPUS	**One Port Umbilical Surgery**
LESSS	**Laparoscopic & Endoscopic Single Site Surgery**

NOTES *В СХЕМАХ РАЗЛИЧНЫХ АВТОРОВ*





ИСТОРИЯ РАЗВИТИЯ ДИАГНОСТИЧЕСКОЙ ЛАПАРОСКОПИИ

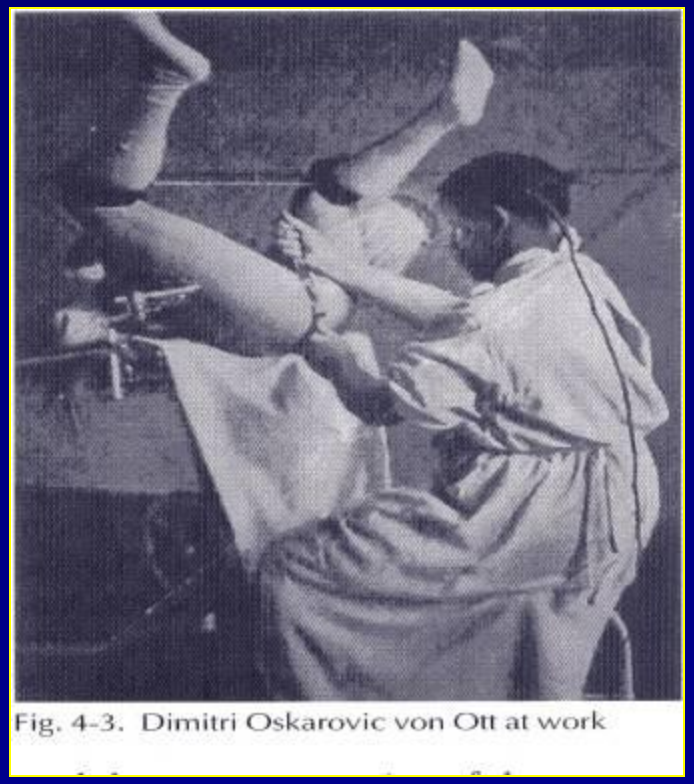


Fig. 4-3. Dimitri Oskarovic von Ott at work

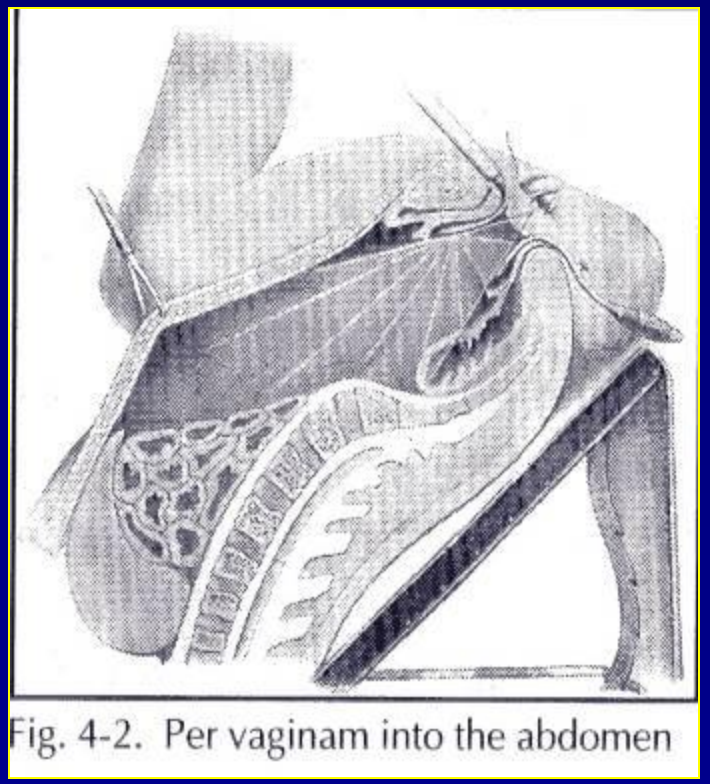


Fig. 4-2. Per vaginam into the abdomen

19 апреля 1901 год – впервые выполнена *вентроскопия* профессором-гинекологом Дмитрием Оскаровичем Оттом и опубликовано сообщение «Освещение брюшной полости (вентроскопия) как метод при влагалищном

ЭКСПЕРИМЕНТАЛЬНЫЕ ОПЕРАЦИИ NOTES НА ЖИВОТНЫХ

Swain, Mills	1991	Трансгастральный доступ	Гастроеюностомия Холецистогастростомия
Kallo, Apollo	2004	Трансгастральный доступ	Диагностическая лапароскопия
Swain	2005	Трансгастральный доступ	Холецистэктомия
Jagannath	2005	Трансгастральный доступ	Клипирование маточных труб
Kantsevoy	2005	Трансгастральный доступ	Спленэктомия
Unger	2005	Трансгастральный доступ	Аппендэктомия
Lima	2006	Чрезмочепузырный доступ	Лапароскопия
Fong	2007	Чрезтолстокишечный доступ	Лапароскопия

КОМИТЕТЫ ПО КОНТРОЛЮ И ИССЛЕДОВАНИЯМ

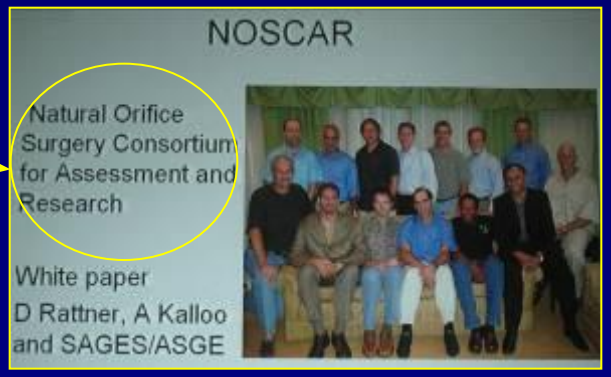
2006 – NOSCAR (ASGE + SAGES)

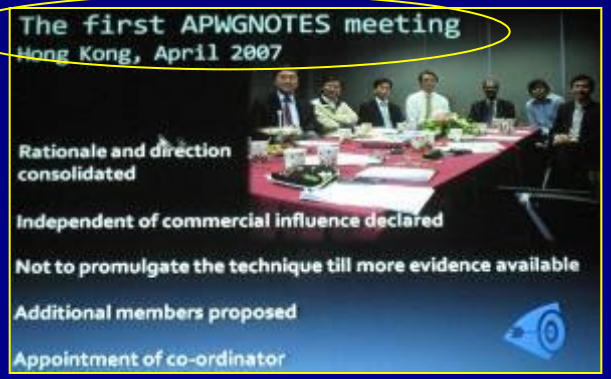
2006 – Asia-Pacific NOTES Working Group

2007 – Euro NOTES

2007 – Japan NOTES

2008 – Отделение транслюминальной хирургии РОЭХ





NOTES ВМЕШАТЕЛЬСТВА У ЧЕЛОВЕКА

Bessler M.	2007	Комбинированный (трансвагинальный и лапароскопический)	Холецистэктомия
Palanivelu C.	2008	Трансвагинальный	Аппендэктомия
Hazey J.W.	2008	Трансгастральный доступ	Диагностическая лапароскопия
Branco Filho A.J.	2008	Комбинированный (трансвагинальный и лапароскопический)	Холецистэктомия
Zorron R.	2008	Трансвагинальный	Холецистэктомия
Zornig C.	2008	Комбинированный (трансвагинальный и лапароскопический)	Холецистэктомия
Per-Ola Park	2008	Трансгастральный доступ	Аппендэктомия

NOTES-ХОЛЕЦИСТЭКТОМИЯ У ЧЕЛОВЕКА

(ГИБРИДНЫЕ ОПЕРАЦИИ, СОЧЕТАЮЩИЕ ЛАПАРОСКОПИЧЕСКИЙ И ТРАНСЛЮМИНАЛЬНЫЙ ДОСТУПЫ)

20 марта 2007 года
Нью-Йорк, США

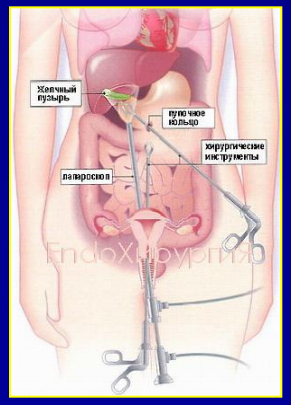
Трансвагинальная лапароскопически-ассистированная холецистэктомия с использованием 3-х троакаров

Профессор Jacques Marescaux

2 апреля 2007 года
Университетская клиника,
Страстбург, Франция

Трансвагинальная лапароскопически-ассистированная холецистэктомия с использованием одного 2 мм троакара в правом подреберье

Официальная презентация
21 апреля 2007 года
на 7 Конгрессе AHPBA,
Лас Вегас, Невада



Трансвагинальная лапароскопически-ассистированная холецистэктомия с использованием одного троакара в параумбиликальной области

24 июля 2007 года

Alice Emmermann
Больница Израэлитов, Гамбург, Германия

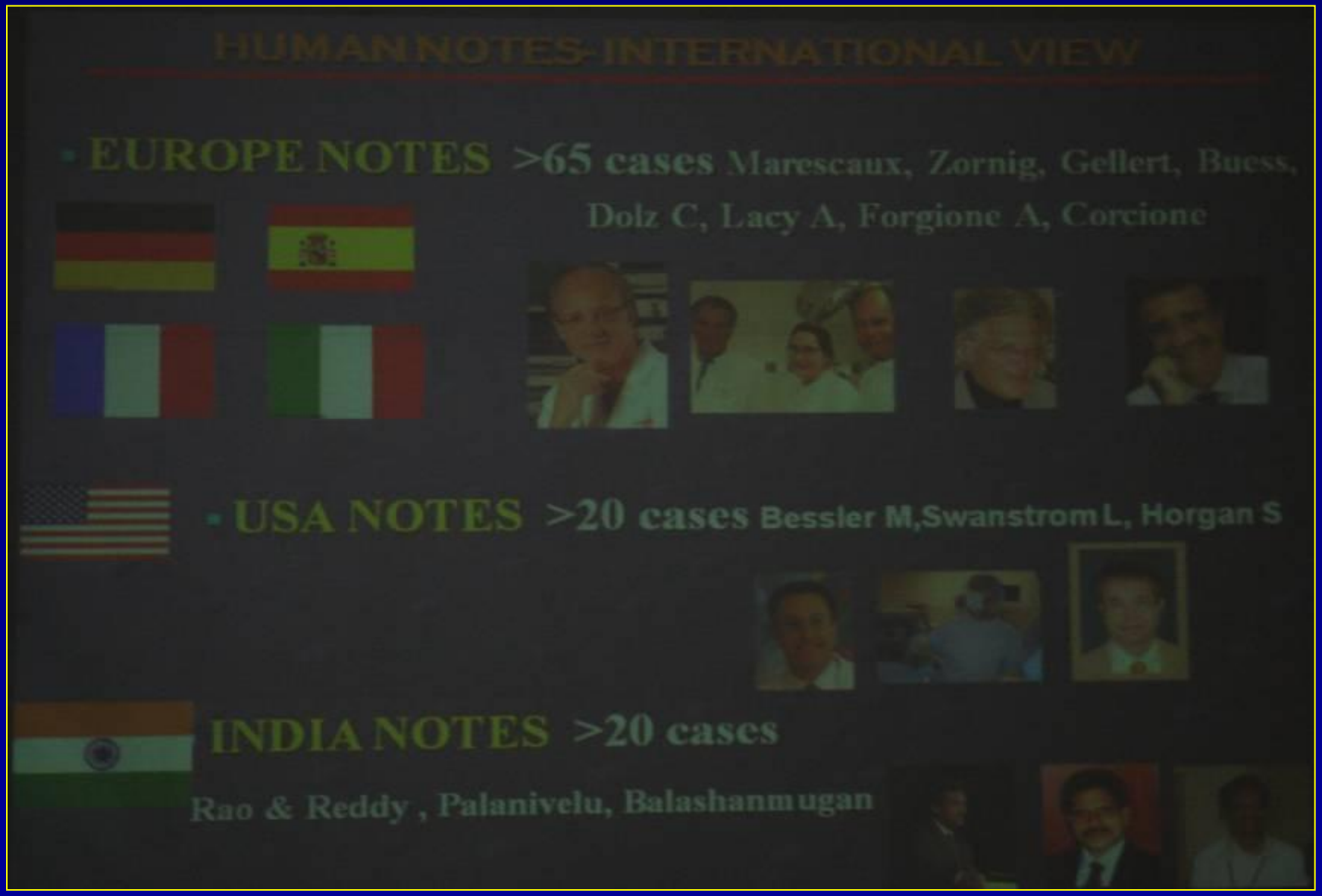
N.O.T.E.S. РАСПРОСТРАНЕННОСТЬ

Впервые в России транслюминальные вмешательства выполнены в «Институте хирургии им. А.В. Вишневского»

(Трансвагинальная холецистэктомия гибким эндоскопом выполнена 16.04.08 г. Хирурги-эндоскописты: Старков Ю.Г., Шишин К.В., Солодинина Е.Н. и др.)

N.O.T.E.S. РАСПРОСТРАНЕННОСТЬ

СТАТИСТИЧЕСКИЕ ДАННЫЕ



СТАТИСТИЧЕСКИЕ ДАННЫЕ

LATIN AMERICA

NOSLA Natural Orifice Surgery Latin America

I·T·M INSTITUTO DE TECNICAS MINI INVA... CENTRO OLYMPUS LATINOAMERICA

June 2008 **N: over 450 cases**

- Argentina 227 cases
  (Speranza & Horgan group)
  - ENOTES/NOTUS 190 cases
  - NOTES TV. 35 cases
  - NOTES TG. 2 cases
- Brazil 220 cases (11 many group)
  - NOTES TV. 173 cases
  - NOTES TG. 27 cases
  - NOTUS 20 cases
- Chile 5 cases (U. C. group)
  - NOTES TV. 5 cases
- Peru 19 cases (Salinas group)
  - NOTES TG. 19 cases
- Mexico 10 cases (Davila group)
  - NOTES TV.

СТАТИСТИЧЕСКИЕ ДАННЫЕ

ARGENTINA-HUMAN NOTES-INTERNATIONAL VIEW

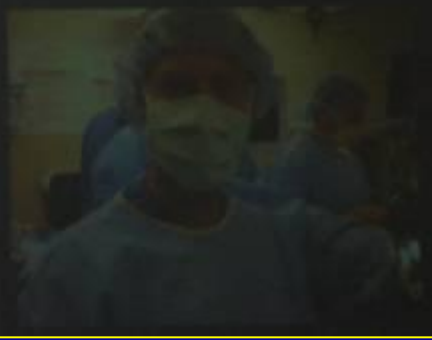
Rosario: Speranza J

·N.O.T.U.S. 164 cases

· Cholecystectomy Appendectomy-inguinal hernia-colectomy-GERD-
ooforectomy-varicocelectomy-hysterectomy-nephrectomy

·N.O.T.E.S. vaginal 15 cases

- **Buenos Aires – Horgan S**
- **10 TV NOTES Cholecystectomy**
  TV and TG Appendectomy

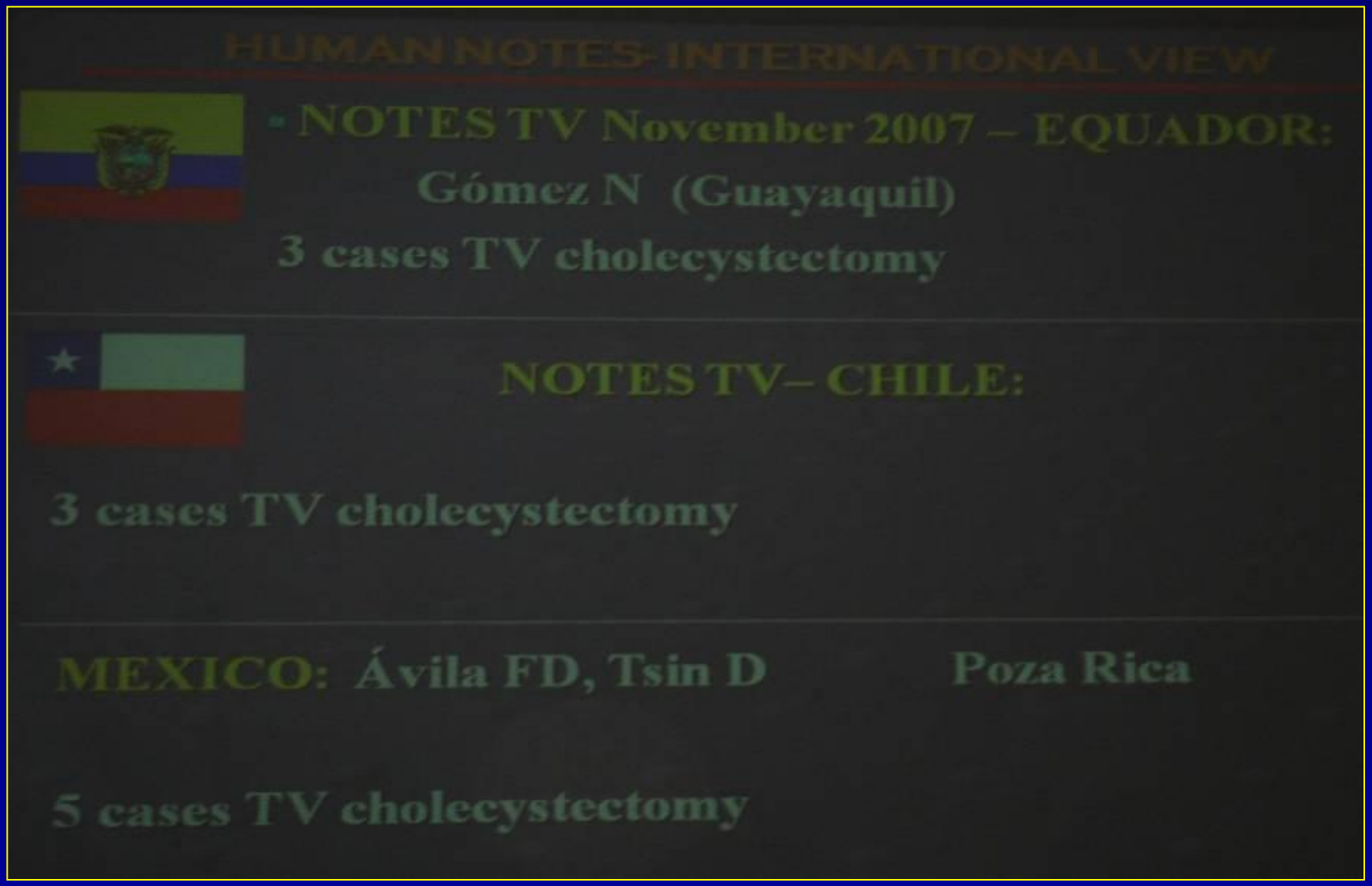


СТАТИСТИЧЕСКИЕ ДАННЫЕ

- **NOTES TV 2007 – PERU:** Salinas G
- 11 cases TG cholecystectomy
- 11 cases TV cholecystectomy
- 1 hepatic biopsy

Patients schedule	27	Complications	
Succeed surgeries	23	1 colon serosal laceration	
Complications	6	1 ISO (umbilicus)	minor
Complications related to NOTES	3	1 gallbladder site bleeding	minor
		1 biliperitoneum	reop
		1 ISO (peritonitis)	reop
		1 epiploic vessel bleeding	open surgery

СТАТИСТИЧЕСКИЕ ДАННЫЕ



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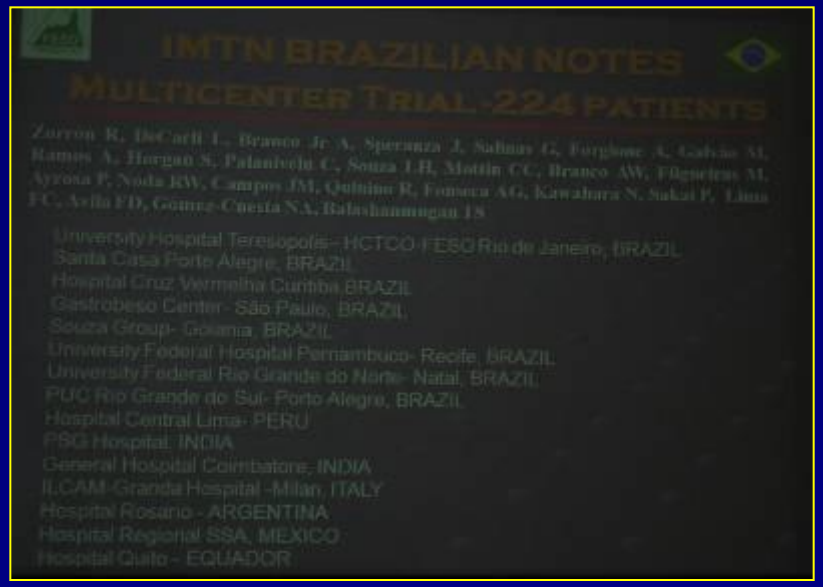
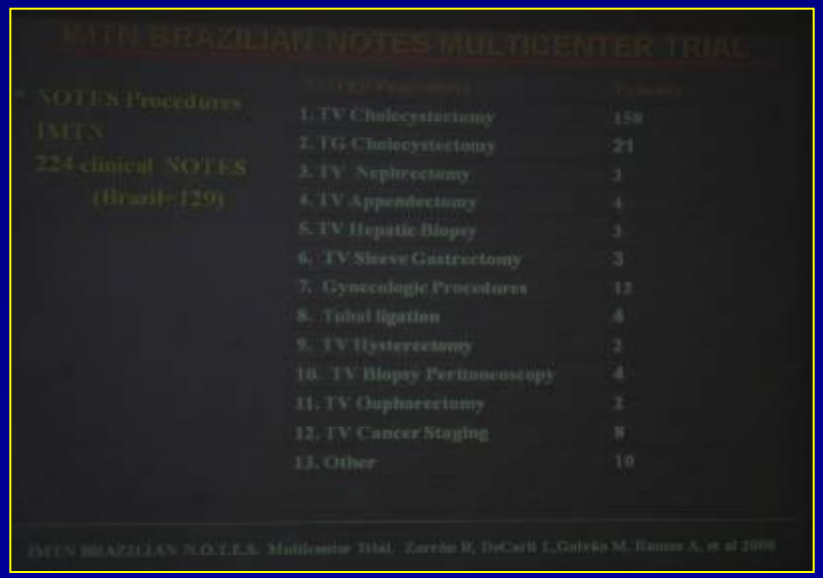




ВСЕМИРНЫЙ ОПЫТ ПО NOTES

Латинская Америка – более 450 наблюдений

Аргентина – 227 наблюдений

190 - трансумбиликальные операции
35 - NOTES трансвагинальные
2 - NOTES трансгастральные

Бразилия 220 наблюдений

20 - трансумбиликальные операции
173 - NOTES трансвагинальные
27 - NOTES трансгастральные

Чили 5 наблюдений (NOTES трансвагинальные)

Перу 19 наблюдений (NOTES трансвагинальные)

Мексика 10 наблюдений (NOTES трансвагинальные)

Германия – 65 наблюдений (NOTES трансвагинальные)

Япония – 5 наблюдений

США – 5 наблюдений (4 - NOTES трансвагинальные и 1 трансгастральная)

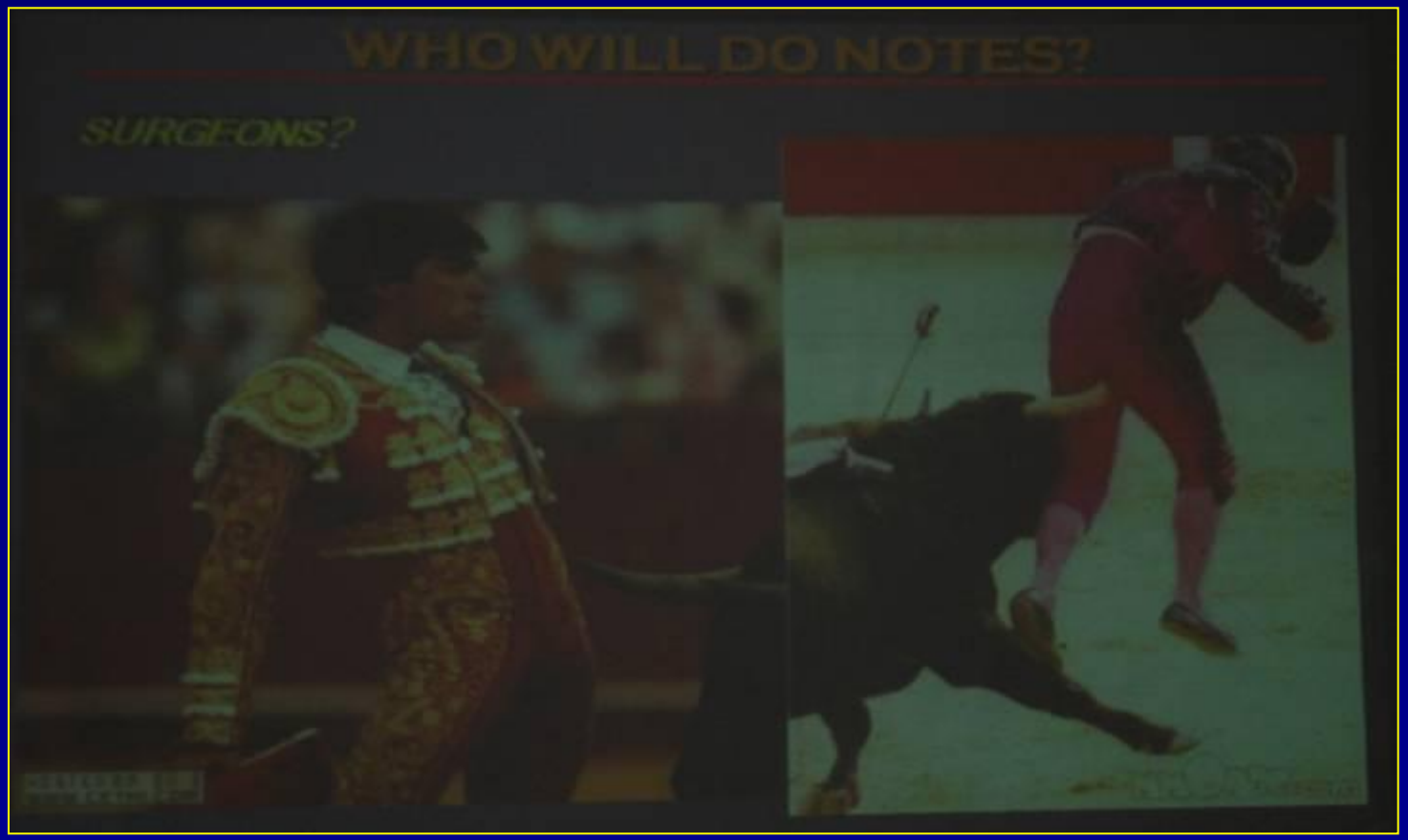
Франция – 1 наблюдение (NOTES трансвагинальная)

Индия – 14 трансгастральных аппендэктомий

Швеция – 1 трансгастральная аппендэктомия

Испания – NOTES колэктомия

КТО БУДЕТ ВЫПОЛНЯТЬ NOTES !?!?...

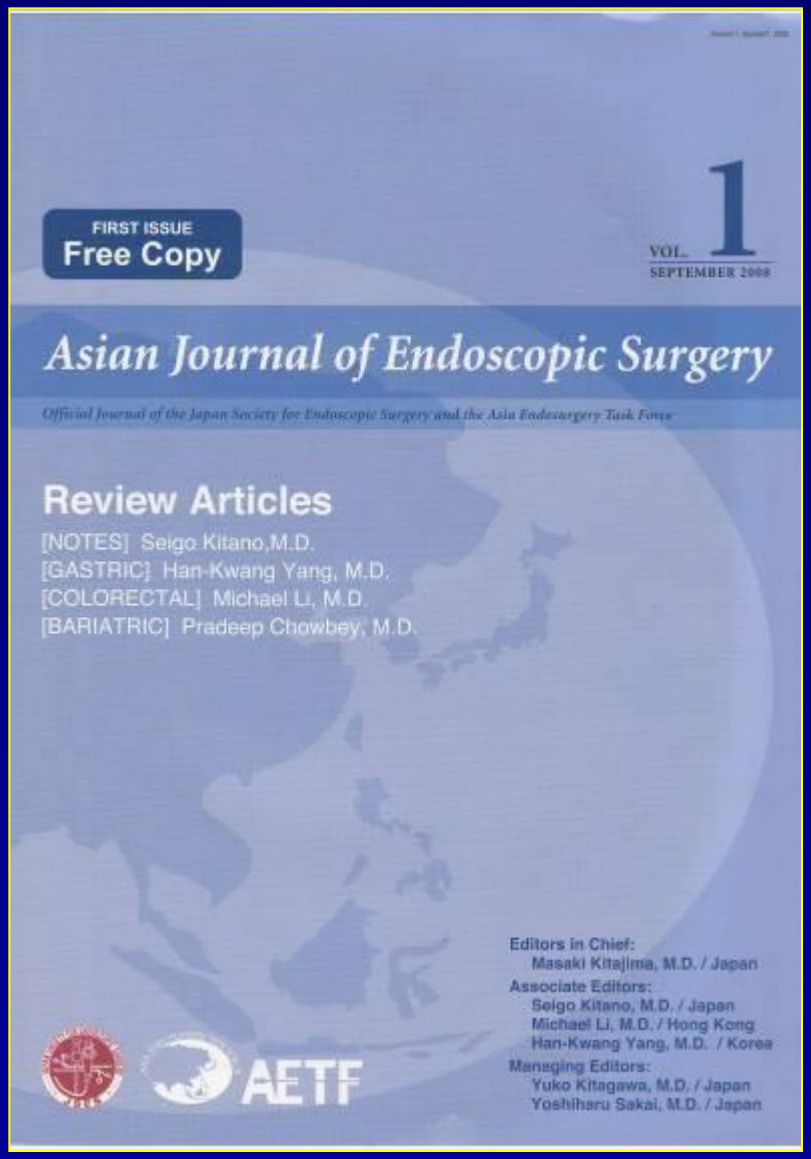


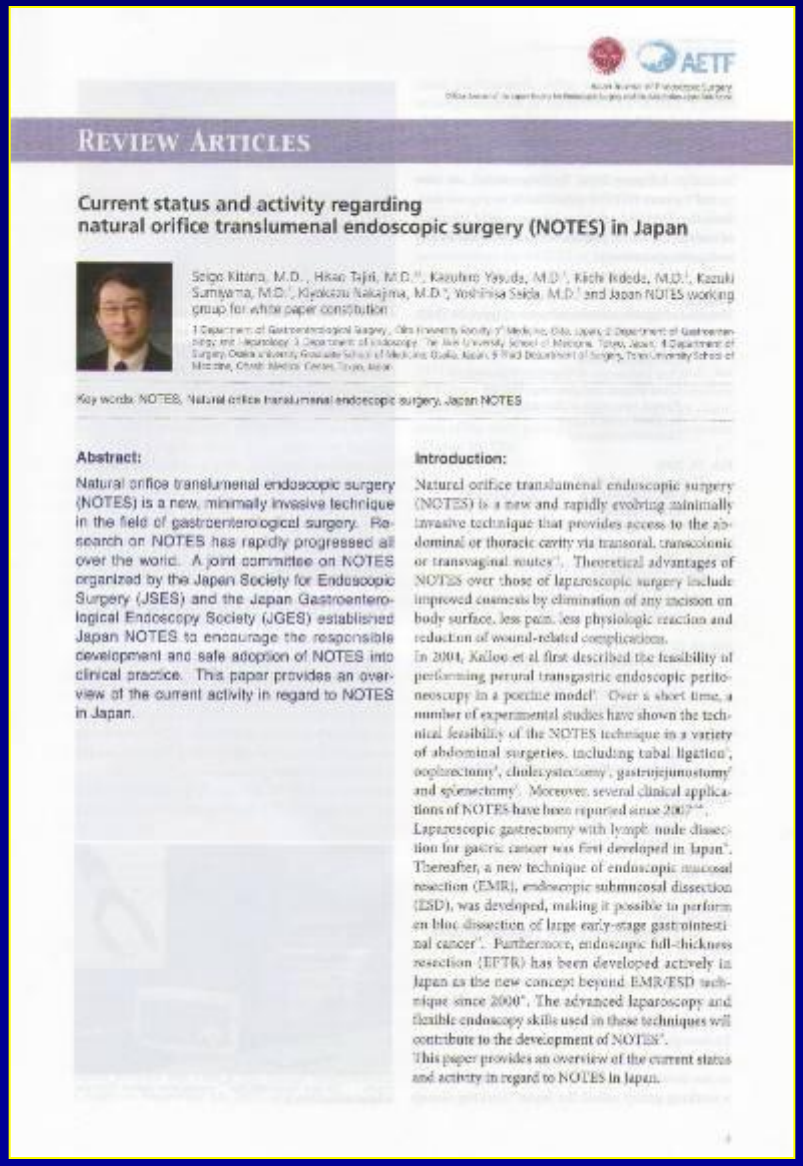
ХИРУРГИ
ГАСТРОЭНТЕРОЛОГИ
ГИНЕКОЛОГИ
ИНТЕРНИСТЫ

ЭНДОСКОПИСТЫ !?!...

NOTES ТЕХНОЛОГИИ НА СОВРЕМЕННОМ ЭТАПЕ

ВЫСТУПЛЕНИЕ ПРЕЗИДЕНТА КОНГРЕССА SEIGO KITANO





NOTES И ИНФЕКЦИЯ

NOTES ™
Not Can we but Should we?

- The technical feasibility of NOTES is proven
- Should there be **any** sacrifices that a patient endures in order to undergo a NOTES procedure?
- How should we measure these risks against the proposed benefits?

Cost, exposure/retraction, length of procedure and infection have been raised as concerns

Summary

- Infection/ GI leak rate will have to be less than 1% added to commodity procedures (gallbladder) where outcomes are uniformly excellent UNLESS outcomes are more revolutionary than predicted.

NOTES colon procedures maybe ideal indication

What will the barriers be?

- Cost, exposure/retraction, length of procedure can likely be brought into a range similar to laparoscopy given sufficient time , ingenuity and market size.

Trans-vaginal approach

- Vaginal flora varies with age, menopause status, and sexual activity.
- Bacterial vaginosis is common and can occur even among sexually inactive.
- Direct contamination of the peritoneum with bacteria secondary to STD is not well studied.

Clinical risk from infection is likely to be low but not absent

Trans-gastric Route

- Trans gastric instrumentation and bacterial contamination of the peritoneal cavity. (Melvin et al 2008)
- 50 pts studied LAP-GB prospectively. PPI affected flora and bacterial load. NO significant infection

Can gastric irrigation prevent infection during NOTES mesh placement? (Buck et al 2008)

- NO!

Trans-vaginal approach

- How do gynecologists feel about transvaginal Notes surgery? (Thiele et al 2008)
  - Concerns about dyspareunia, endometriosis, infection
- A randomized trial of povidone iodine and chlorhexidine as antiseptics for vaginal hysterectomy (Culligan et al 2006)
  - Chlorhexidine is superior but contamination in both groups is persistent

Pelvic abscess and pelvic cellulitis runs 1 to 3%

Trans-colonic approach

- Even in the face of bowel preparation, bacterial counts are significant.
- Intra-abdominal abscess rate from incidental appendectomy appendiceal stump blow out rate is 1%

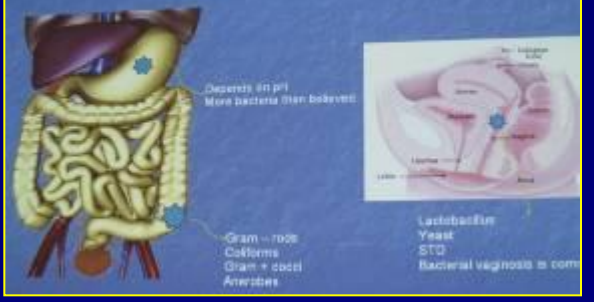
Clinically significant anastomotic leak rate is 2% however radiographic leak rate is 33%

Trans-colonic approach

- One should assume that there will be some incidence of infection associated with this route.

Using appendectomy as a model the infection and closure risk will be in the 1 to 3% range.

Most common routes



Concluding thoughts

- Trans gastric routes are likely to be associated with fewer infections.
- Even if the added infection rate is 1% then worldwide implication could be significant even for cholecystectomy where 10,000 additional infections will be seen for every one million cholecystectomies performed.

Concluding thoughts

Now we have.....

Revolutionary pt outcomes/technology

Revolutionary technology

NOTES И ИНФЕКЦИЯ

Methods

- 3 fluid samples collected from each patient

Sample	Collection Site	Lavage	Gastrotomy
A	Scope Rinse	No	Pre-gastrotomy
B	Peritoneum RUQ	Yes	Pre-gastrotomy
C	Peritoneum RUQ	Yes	Post-gastrotomy

Conclusion

- Scopes had bacterial contamination after being disinfected
- Bacterial contamination in the peritoneum is seen in 5/10 pts in sample C
- Transgastric peritoneoscopy caused no significant contamination in the peritoneal cavity
- There was minimal bacterial growth in the contaminated peritoneal fluid resulting in no clinically significant infections
- Gastric sterilization does not seem necessary in trans-gastric NOTES procedures

Conclusion

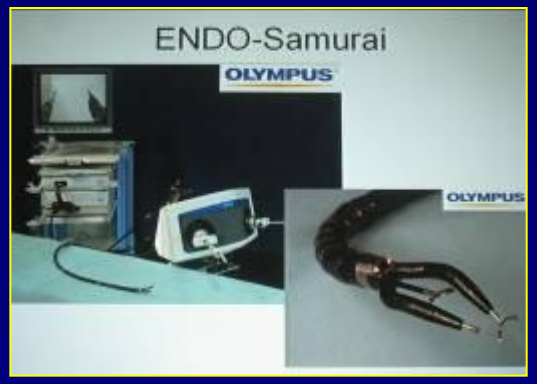
- Transgastric access to the peritoneal cavity is a safe platform on which the first generation NOTES procedures can be performed without any increased risk of infection or compromising the standard of care in humans

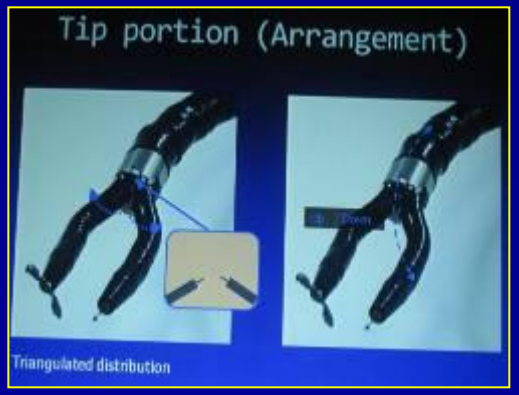
The Ohio State University
Center for Minimally Invasive Surgery

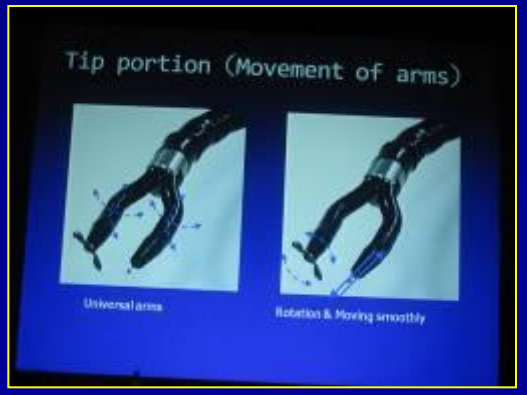
НЕ ВЕРЬТЕ, ЧТО ТОМ КРУЗ БЫЛ ПОСЛЕДНИЙ САМУРАЙ
Endo SAMURAI ОТКРОЕТ НОВЫЙ ПУТЬ В 21-Й ЭНДОСКОПИЧЕСКИЙ ВЕК…

Surgery
Laparoscopy
More Interventional
Merging Technologies
Less Invasive
Endoscopy

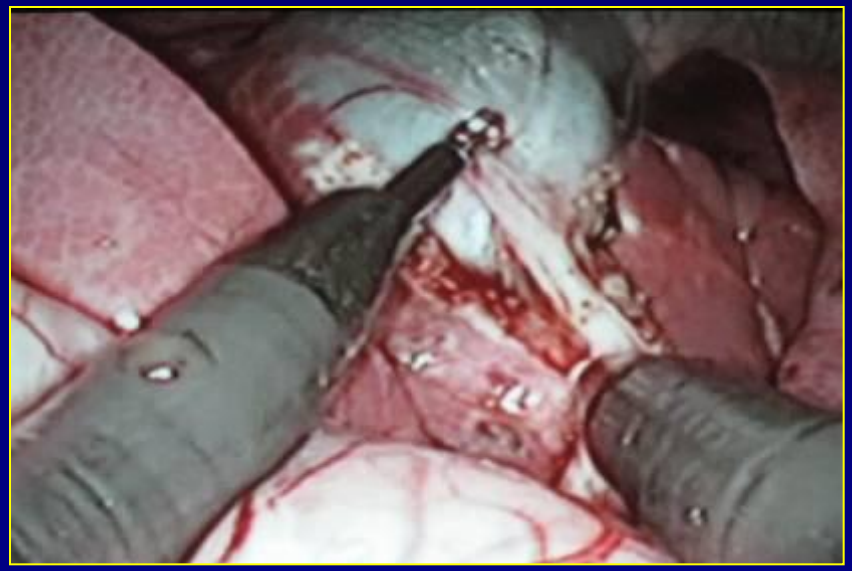
EndoSAMURAI

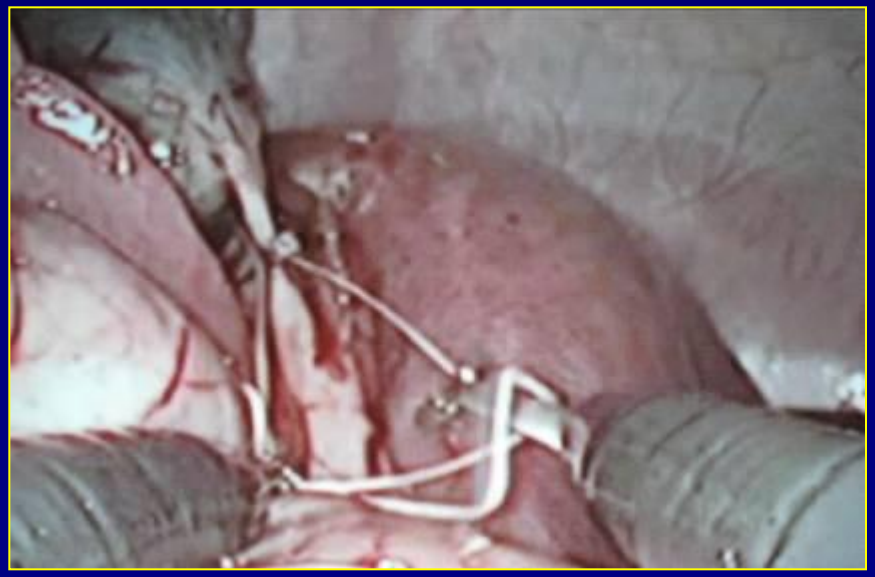


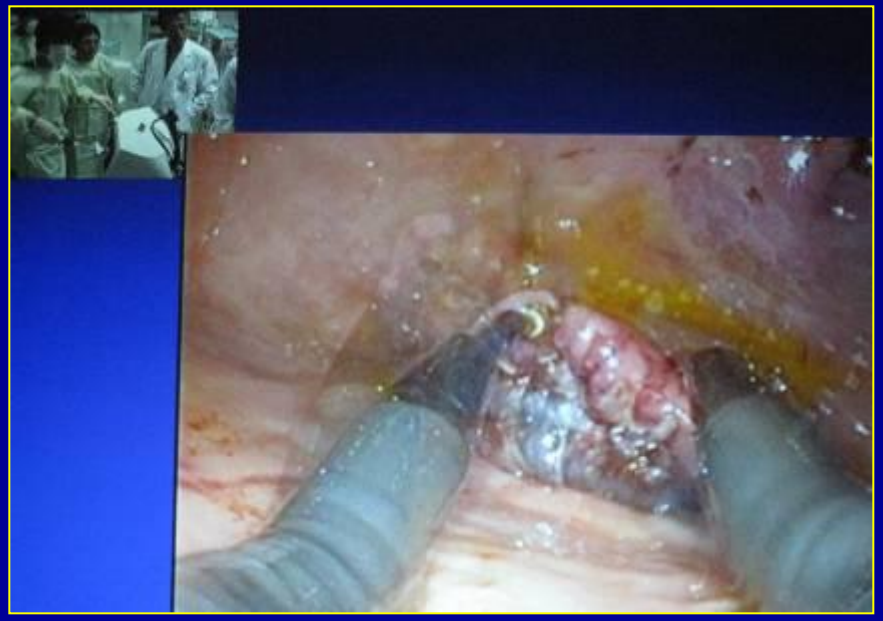




ТРАНСРЕКТАЛЬНАЯ ХОЛЕЦИСТЭКТОМИЯ С ИСПОЛЬЗОВАНИЕМ EndoSAMURAI (в эксперименте)



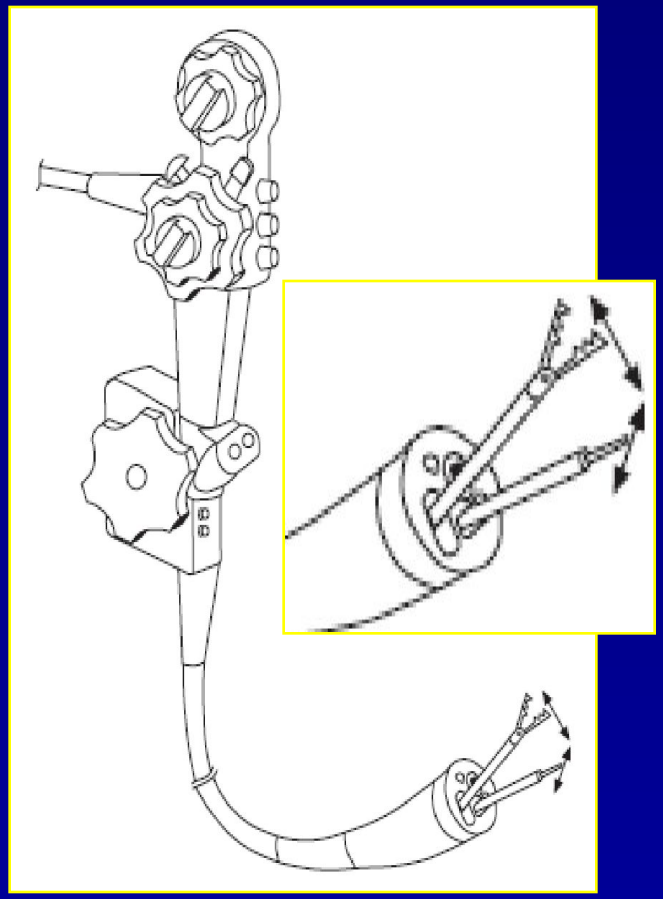




РАБОТА EndoSAMURAI НА СТЕНКЕ ПОЛОГО ОРГАНА (в эксперименте)

ГИБКОВОЛОКОННЫЕ ЭНДОСКОПЫ ДЛЯ NOTES ВМЕШАТЕЛЬСТВ

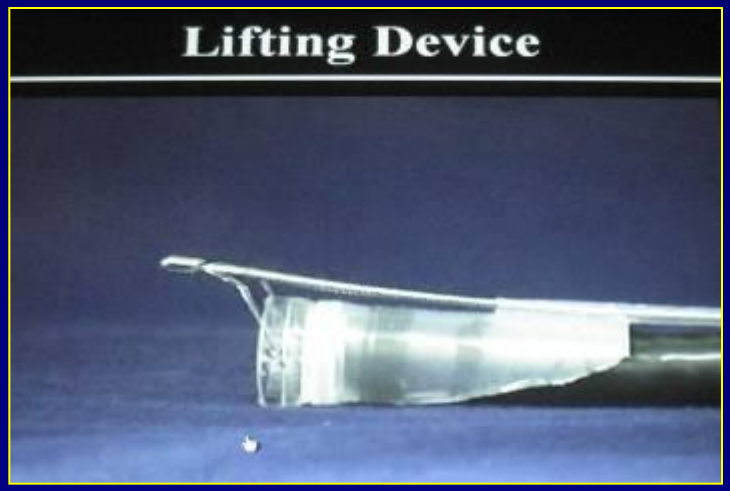
R-scope

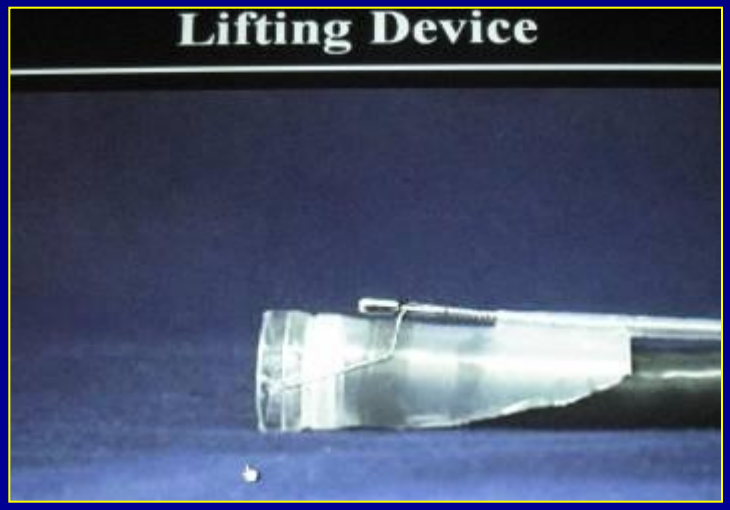


3-х канальный эндоскоп

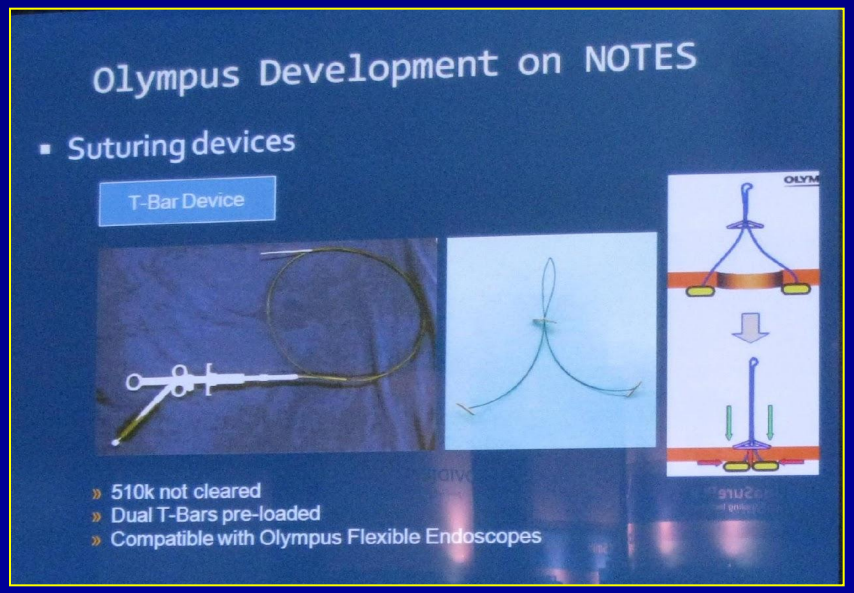
Эндоскоп COBRA

NOTES - НОВЫЕ ИНСТРУМЕНТЫ

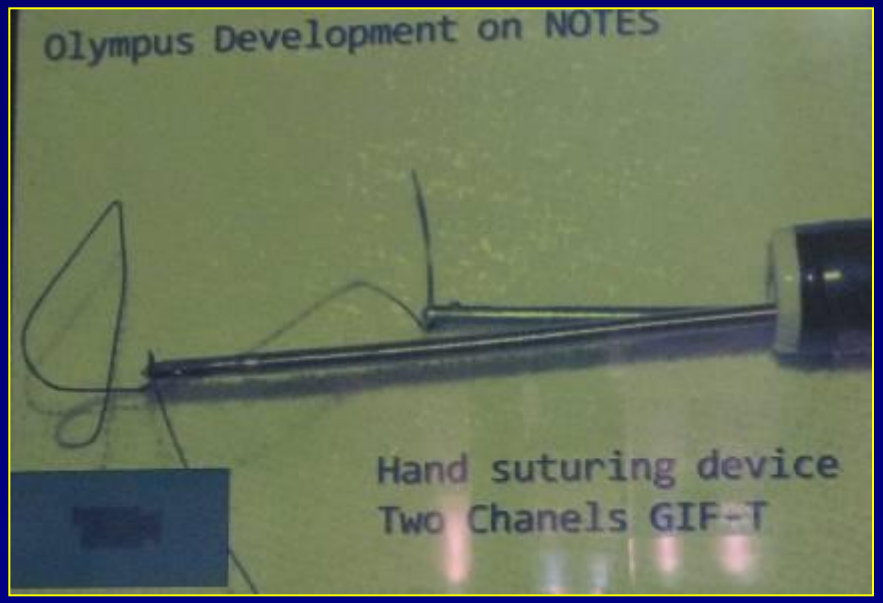


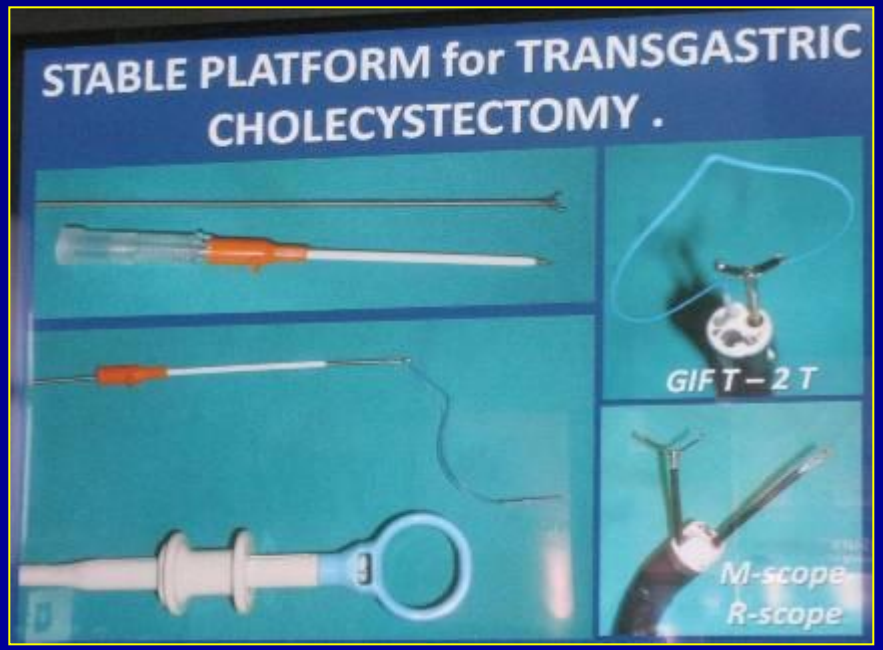


NOTES - ИНСТРУМЕНТЫ

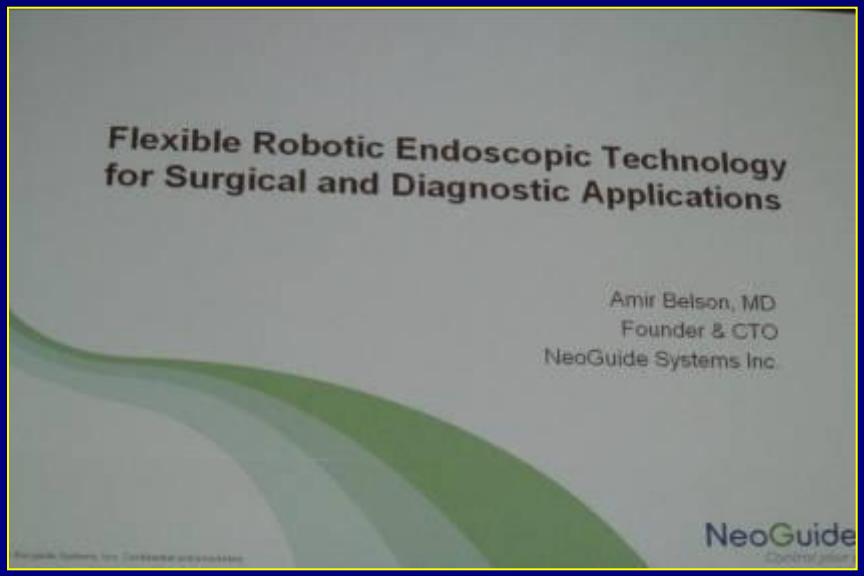


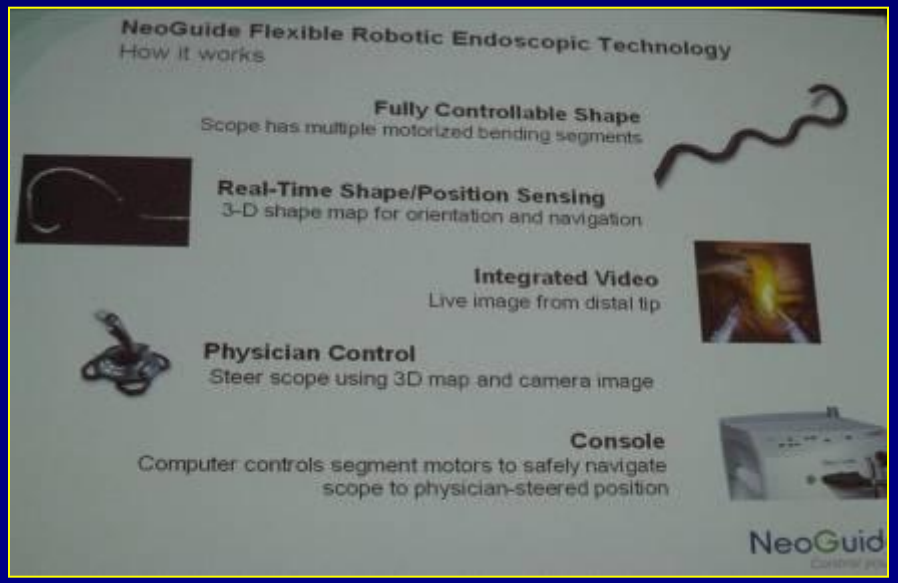
NOTES - ИНСТРУМЕНТЫ

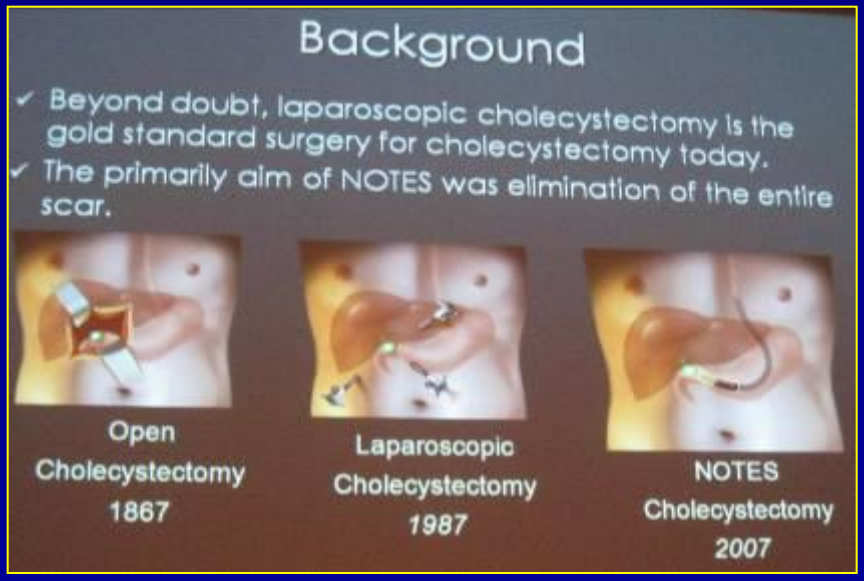


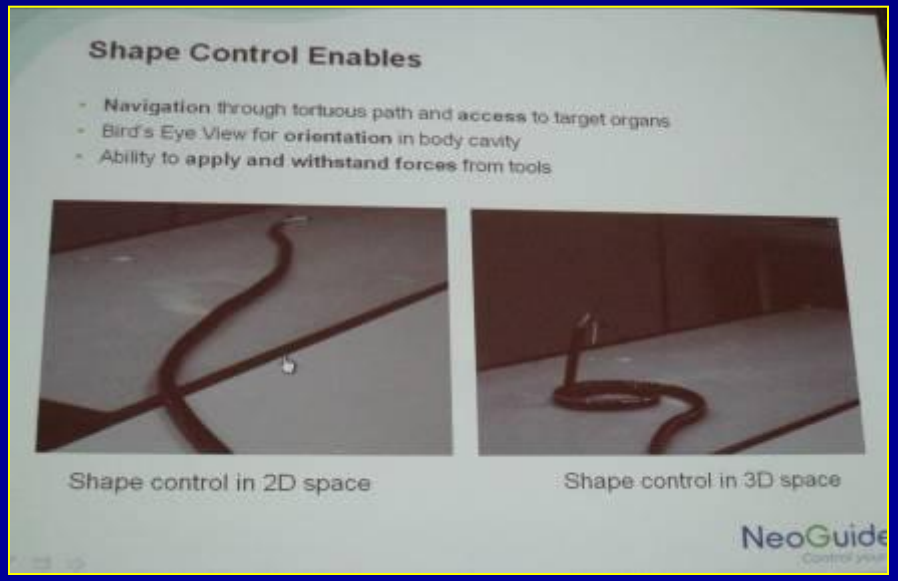


ГИБКОВОЛОКОННЫЕ РОБОТОНИЗИРОВАННЫЕ ЭНДОСКОПИЧЕСКИЕ ТЕХНОЛОГИИ



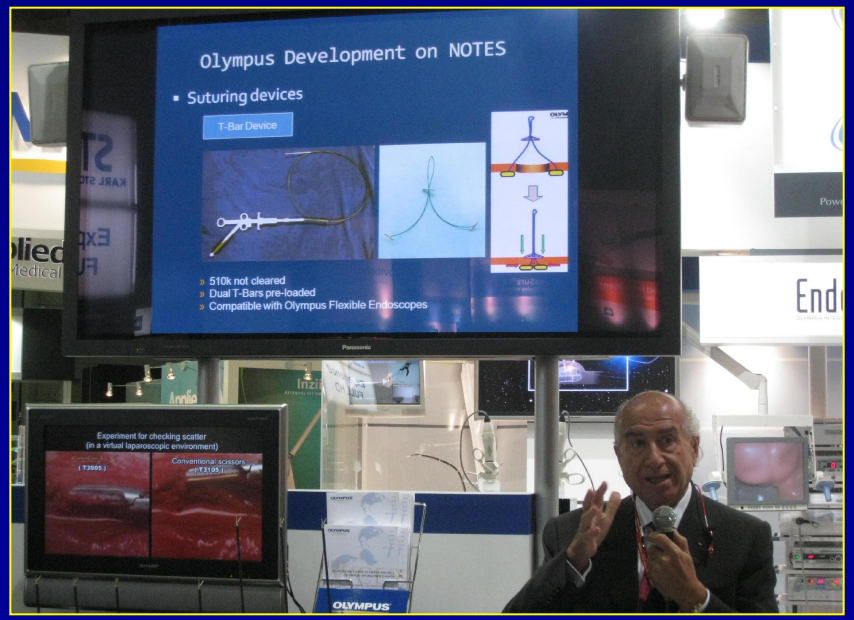




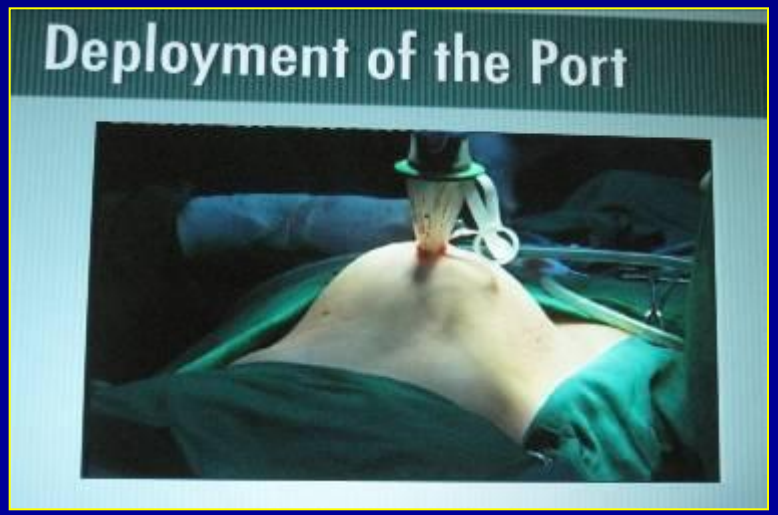


КОЛОССАЛЬНЫЙ ОПЫТ, ПОЧТЕННЫЙ ВОЗРАСТ В ЛИЦЕ АРМЕНГОЛ МИРО…
- ПРИЗНАЮТ И ДАЮТ ЖИЗНЬ НОВЫМ ТЕХНОЛОГИЯМ В ВИДЕ *N O T E S …*

КОЛОССАЛЬНЫЙ ОПЫТ, ПОЧТЕННЫЙ ВОЗРАСТ В ЛИЦЕ АРМЕНГОЛ МИРО… - ПРИЗНАЮТ И ДАЮТ ЖИЗНЬ НОВЫМ ТЕХНОЛОГИЯМ В ВИДЕ *N O T E S …*



SILS	Single Incision Laparoscopic Surgery
OPUS	One Port Umbilical Surgery
SPA	Single Port Access
LESSS	Laparoscopic & Endoscopic Single Site Surgery



СРАВНИТЕЛЬНАЯ ОЦЕНКА ГИБКОВОЛОКОННОЙ ПЕРИТОНЕОСКОПИИ И РИГИДНОЙ ЛАПАРОСКОПИИ

ASSESSMENT AND COMPARISON OF DIGITAL IMAGE QUALITY FOR PERITONEOSCOPY USING THE FLEXIBLE ENDOSCOPE AND THE RIGID LAPAROSCOPE FOR NOTES PROCEDURES

The 11th World Congress of Endoscopic Surgery

Ozanan R Meireles MD 1, Lia R Assumpcao MD 1,Timothy M Pawlik MD 1, Michael A Choti MD 1, Noam Belkind MD 2, Keith N Apelgren MD 2, Michael R Marohn DO 1

1 – Dept of Surgery, Johns Hopkins University School of Medicine, Baltimore, MD
2 – Dept of Surgery, Michigan State University College of Human Medicine, MI

Results

Mean DIQACSP

Flexible Endoscope

DIQACSP 31.35 ± 3.19

Rigid Laparoscope

DIQACSP 28.64 ± 4.11

(P = 0.193)

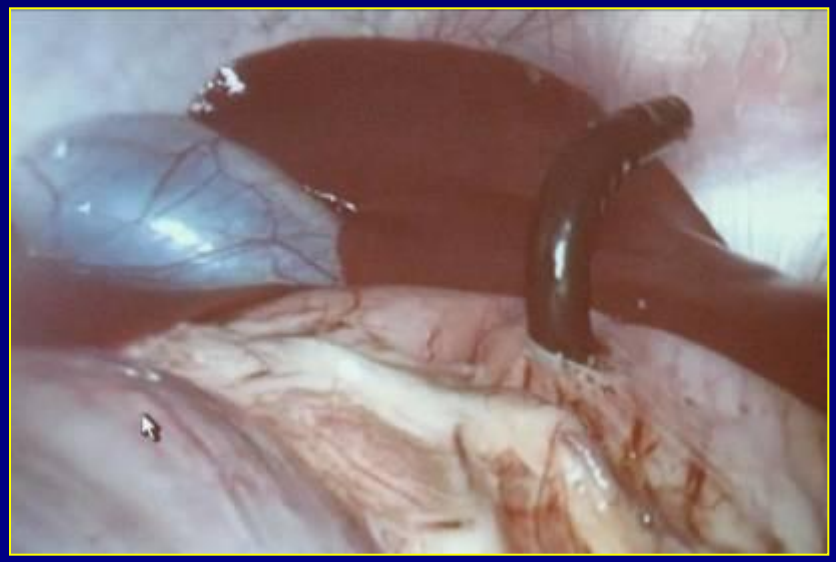
Conclusion

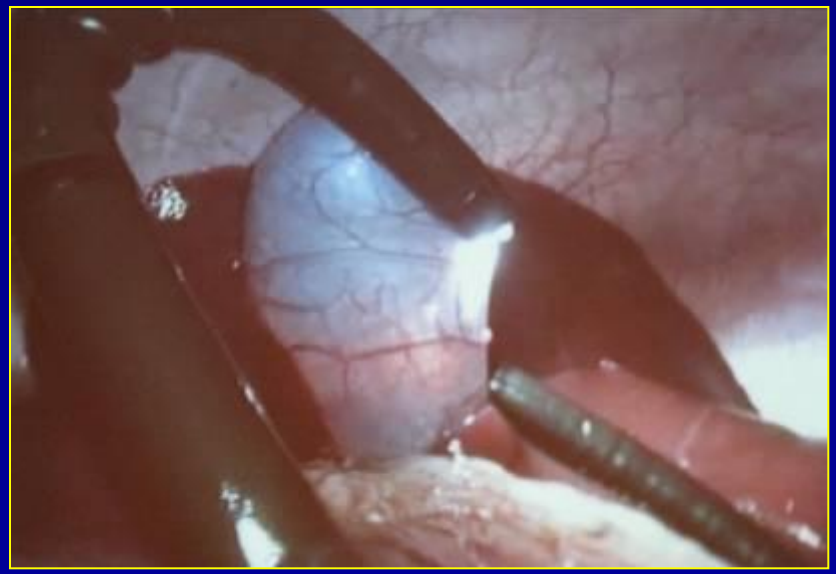
- Poor maneuverability and lack of rigidity remain important technical challenges for stable intraperitoneal navigation
- Lens angulation are designed for closer view and have limitation for more panoramic view
- Flexible endoscopes may be the ideal tools for NOTES procedures
- Provide excellent image quality during peritoneoscopy
- Their reach goes beyond the rigid scopes
- Offer other unique advantages

Conclusion

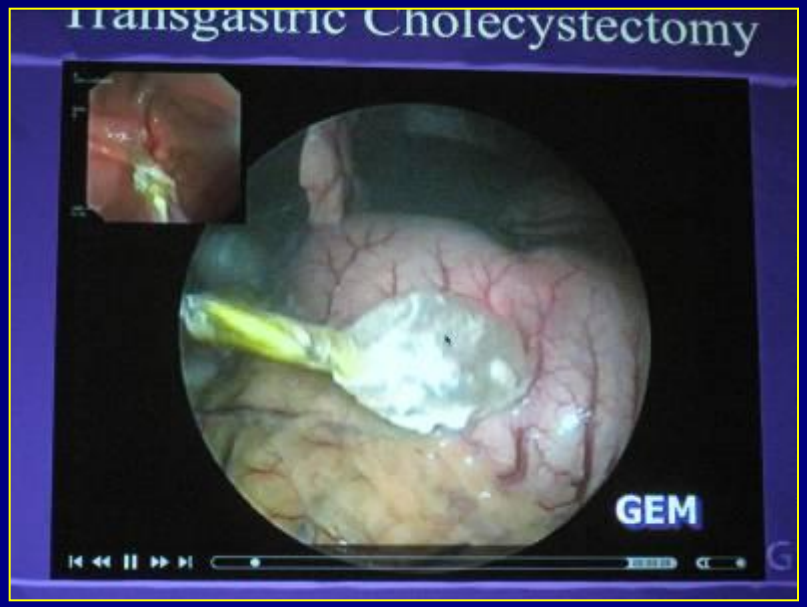
- Further improvements in flexible scope design are warranted:
  - Adjustable less angulation
  - Conformable flexibility and rigidity
- Flexible scopes have the potential to evolve into the preferred image source for both NOTES and trans-abdominal peritoneoscopy.

ТРАНСГАСТРАЛЬНАЯ ХОЛЕЦИСТЭКТОМИЯ

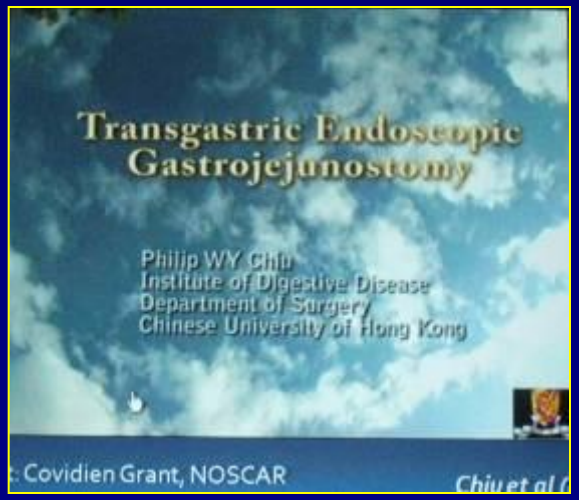




TGChol. ТРАНСГАСТРАЛЬНАЯ ХОЛЕЦИСТЭКТОМИЯ



ТРАНСГАСТРАЛЬНАЯ ЭНДОСКОПИЧЕСКАЯ ГАСТРОЕЮНОСТОМИЯ (в эксперименте)



TVCholI. ТРАНСВАГИНАЛЬНАЯ ХОЛЕЦИСТЭКТОМИЯ С ТРАНСУМБИЛИКАЛЬНОЙ АССИСТЕНЦИЕЙ

Surgical procedure

Sana Hospitals Berlin

Combined transvaginal and transumbilical access

1. Lloyd-Davis position
2. Infraumbilical incision
   - Verress-needle
   - atraumatic 5 mm Trokar
   - 5 mm video-camera
3. Head tilted down to inspect the small pelvis

Conclusions

Sana Hospitals Berlin

- Transvaginal assisted cholecystectomy is feasible as a routine procedure
- Patients are happy with this new procedure
- Pain no difference to lap. CCE
- So far no infections
- Three surgeons in training

4. Transvaginal access through posterior vault

Sana Hospitals Berlin

blunt introduction of a long, atraumatic10/12 mm trocar for 45° video camera

long forceps, introduced through posterior vault

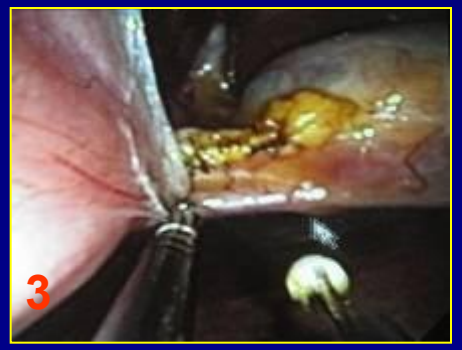
5. preparation of triangle of Calot

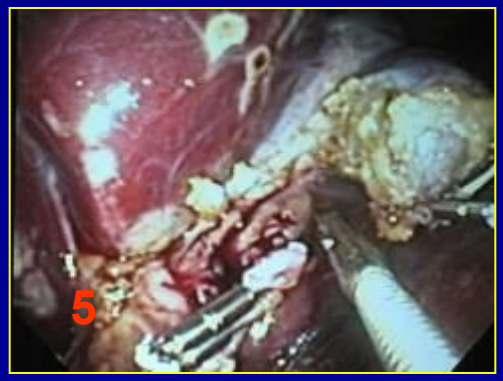
emoving the gallbladder in a bag

Sana Hospitals Berlin

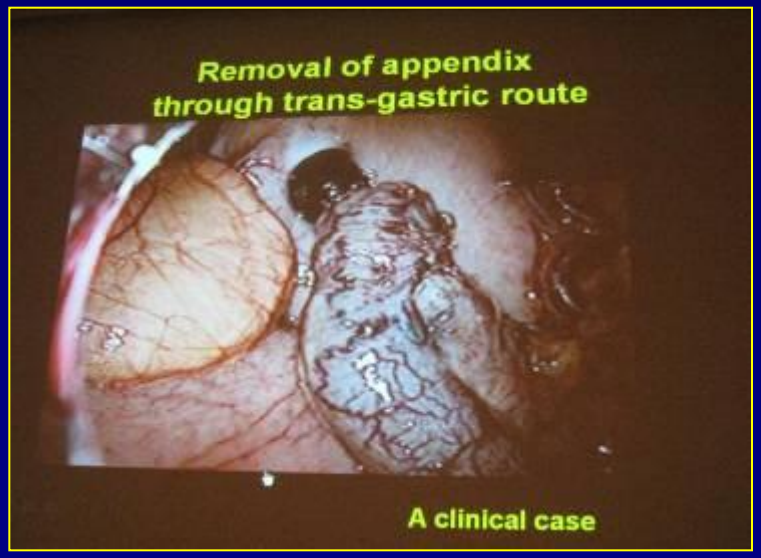
'. Suture to the posterior vault

TVChol Трансвагинальная холецистэктомия у человека с использованием IT-Knife инструмента

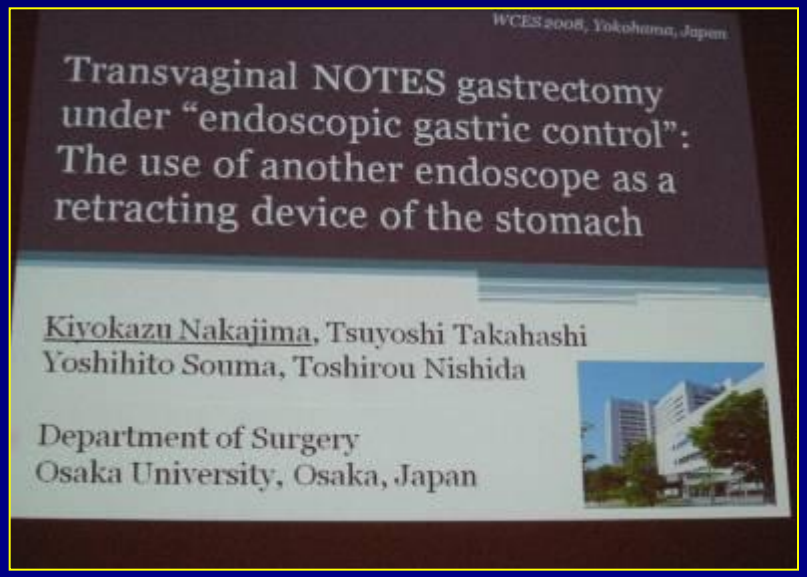


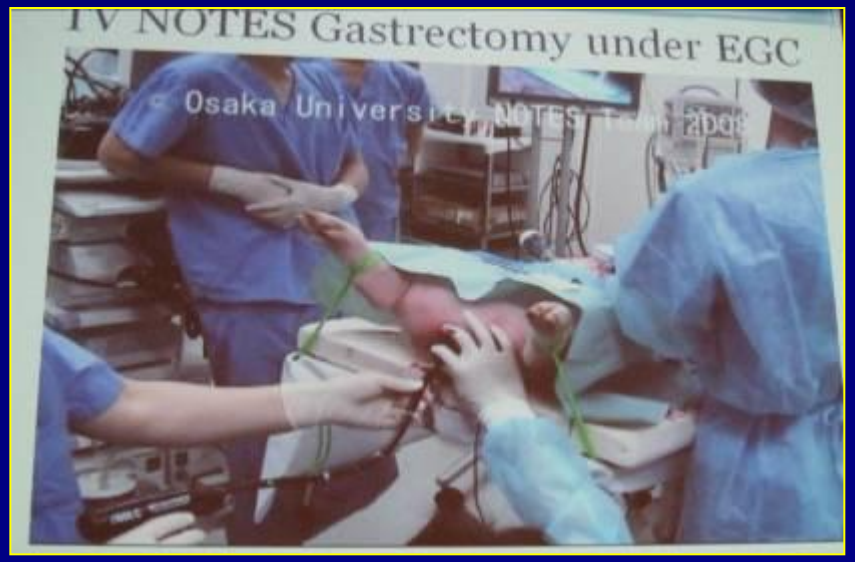


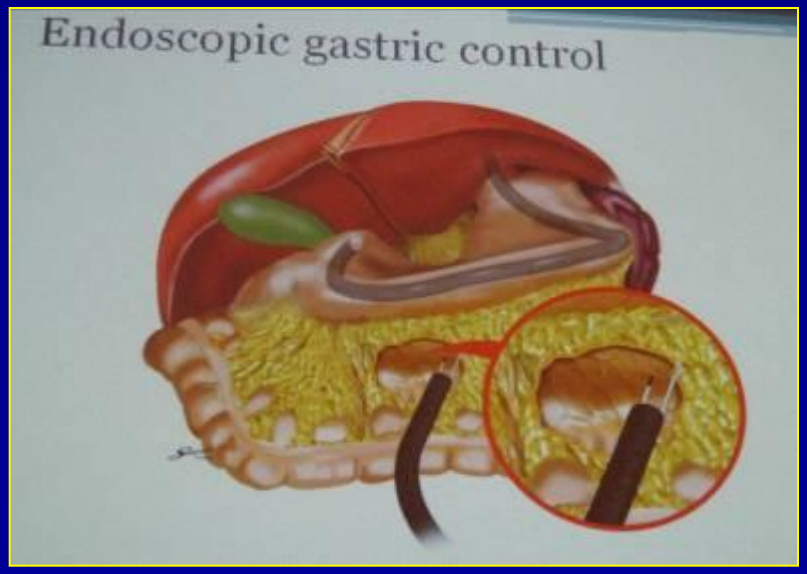
NOTES. ТРАНСГАСТРАЛЬНОЕ ИЗВЛЕЧЕНИЕ УДАЛЕННЫХ ОРГАНОВ

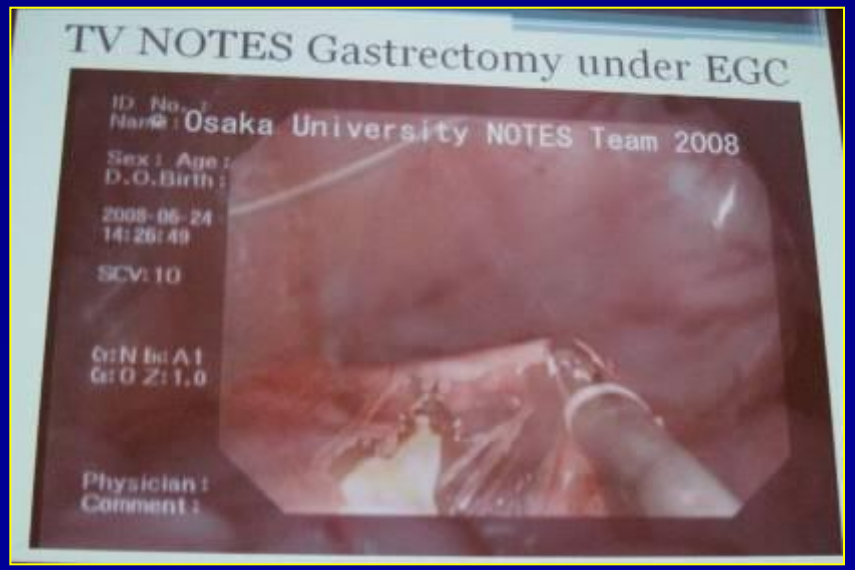


ТРАНСВАГИНАЛЬНАЯ NOTES ГАСТРЭКТОМИЯ В ЭКСПЕРИМЕНТЕ



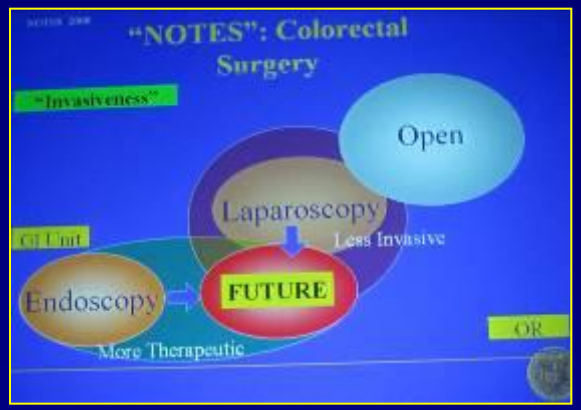


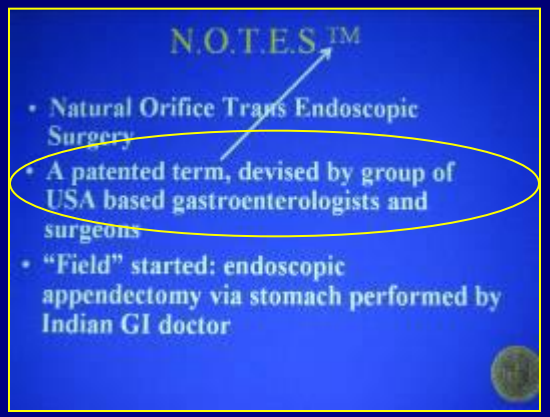




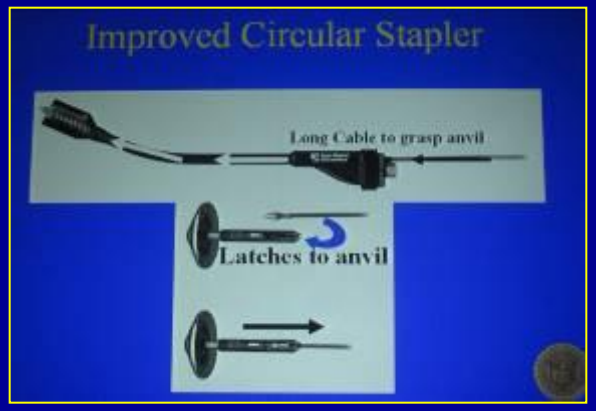
COLON - NOTES


Emerging MIS Techniques for Colorectal Surgery: Endoluminal, Combined approaches, NOTES™
CORNELL
NEW YORK PRESBYTERIAN


"NOTES": Colorectal Surgery
"Invasiveness"
Open
Laparoscopy
Less Invasive
GI Unit
Endoscopy
FUTURE
OR
More Therapeutic

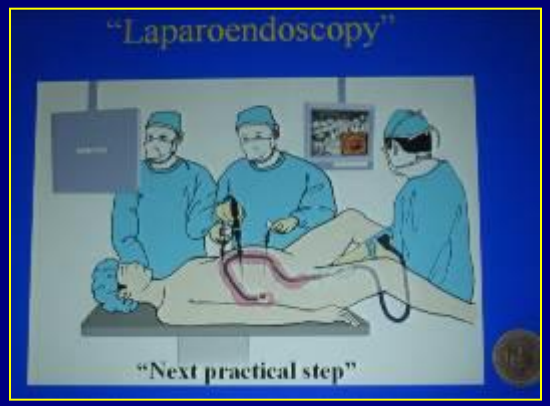

N.O.T.E.S.™
• Natural Orifice Trans Endoscopic Surgery
• A patented term, devised by group of USA based gastroenterologists and surgeons
• "Field" started: endoscopic appendectomy via stomach performed by Indian GI doctor


New Stapling Devices
60°
90°
•Hand Held
•Flexible shaft
•Various Stapler clips

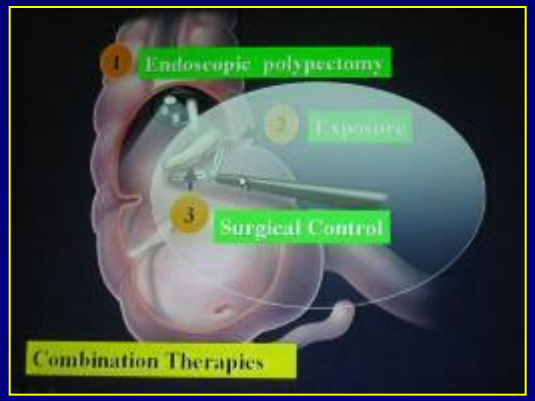

Improved Circular Stapler
Long Cable to grasp anvil
Latches to anvil


Practical Applications: New Endoluminal Therapies in Colorectal Diseases
• Closure of perforations
• Repair of anastomotic leaks
• Aggressive excisional therapies
– Benign lesions
– Some cancers?
– Strictures
– Others

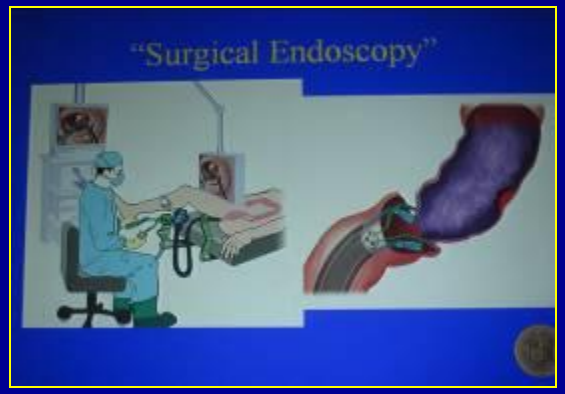
COLON - NOTES


"Laparoendoscopy"
"Next practical step"


CO2 Insufflator for Colonoscope

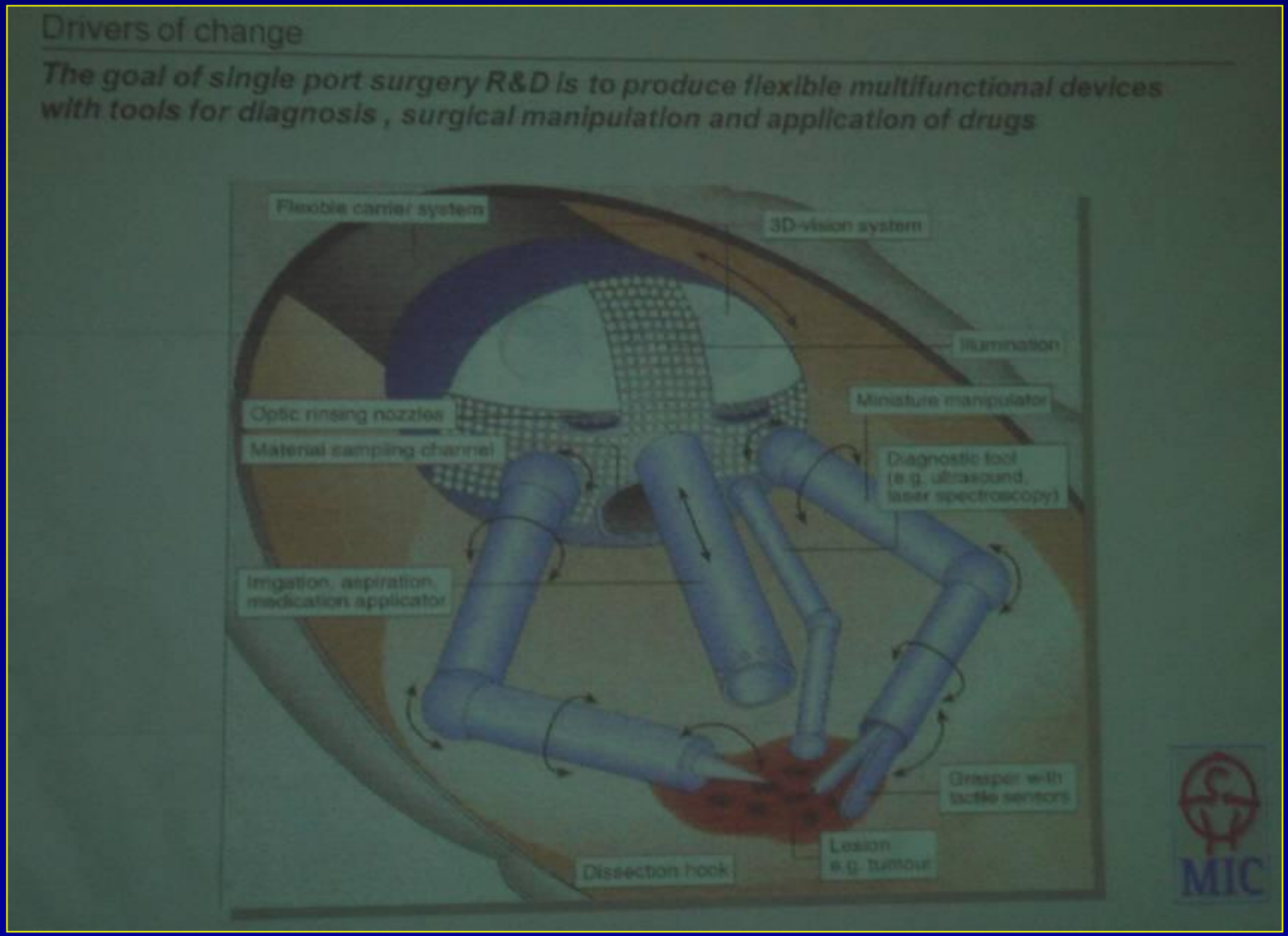

1 Endoscopic polypectomy
2 Exposure
3 Surgical Control
Combination Therapies


"NOTES" Colon & Rectal Surgery
Surgical Endoscope
Endoluminal procedure development


"Surgical Endoscopy"


Surgical Endoscopy:
"Advanced" Endoluminal
Therapies

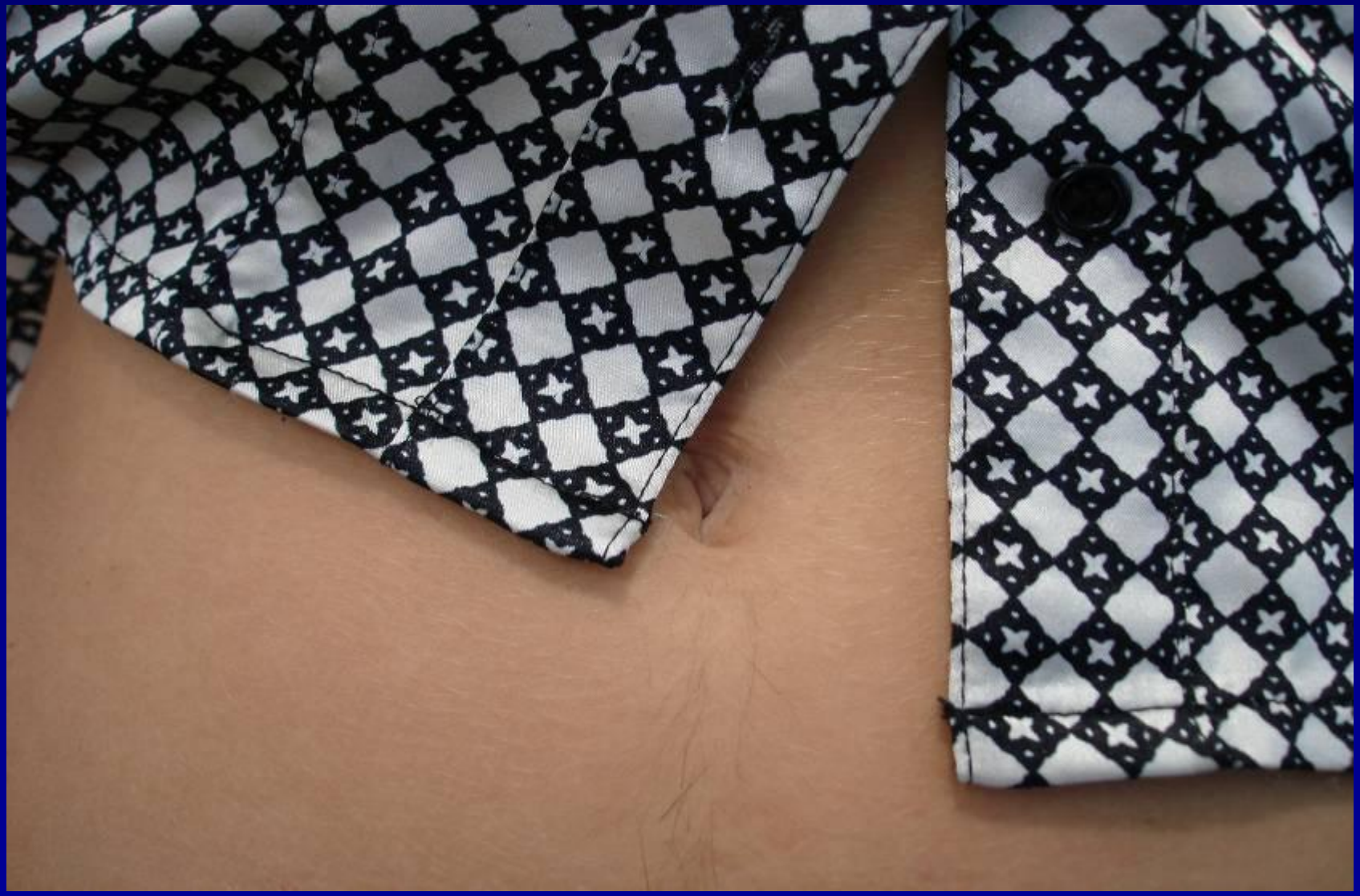
NOTES – под грифом «NO Photo…»



ПОМОГАЯ ДРУГ ДРУГУ БУДЕМ ДВИГАТЬСЯ ВПЕРЁД …

СПАСИБО ЗА ВНИМАНИЕ И ТЕРПЕНИЕ!

N.O.T.E.S.



N.O.T.E.S.